

# *The World's* Great Events

An Indexed History of the World  
from Earliest Times to the Present Day

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ILLUSTRATED

VOLUME SEVEN

*From A.D. 1857 to A.D. 1904*



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FROM A.D. 1857 TO A.D. 1904

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# THE INDIAN MUTINY

(A.D. 1857)

SIR RICHARD TEMPLE

**A**FTER the occurrence of some isolated mutinies in the Bengal native soldiery, generally called sepoy, during the early part of 1857, the native portion of the garrison at Meerut, near Delhi, broke out on the 10th of May; the European garrison failed to prevent them, and the mutineers marched straightway to Delhi, and were joined by the native troops there and by the city mob. The rebels set up as Emperor the titular Great Mogul, who dwelt in the ancestral palace there under British protection, and proclaimed the restoration of the Mogul Empire. This event was rapidly followed by the revolt of almost the whole native army of the Bengal Presidency. Their comrades of the Bombay Presidency were but slightly affected, and those of Madras hardly at all. At that time the native forces numbered more than 247,000 men of all arms; of these about 50,000 belonged to Madras, 30,000 to Bombay, and the remainder to Bengal; among the latter, however, were

*Outbreak  
of the  
sepoys.*

*Number  
of native  
troops.*

*Insulation  
of the  
British.*

many troops called irregular. A large part of the irregular troops remained stanch; but of the Bengal regular troops only seven battalions continued in service. From 80,000 to 90,000 soldiers, horse and foot, were in revolt, having in many cases murdered their officers, and sometimes the European families also. The mutineers were cantoned over many stations in broad provinces, held forts, arsenals, treasuries. They were armed with British weapons, had been organized with British discipline, were in possession of much artillery, of a great number of cavalry horses and other transports, and of vast sums of treasure. In Hindustan, in Oudh, and in parts of Malwa, throughout the summer the British power was insulated at certain points, such as the camp before Delhi, the cantonment at Meerut, the fortresses at Agra and Allahabad, the weak fortifications at Lucknow. Elsewhere the European magistracy with their families had been either killed or hunted away, and the court-houses with their records burnt. The disaster extended over at least an area of 100,000 square miles, with a population of 40,000,000. It occurred, too, at the worst season of the year. If not speedily stamped out the fire must spread over the whole country. The year was a centenary of historic events. It was just one hundred years since Clive founded British dominion at Plassey, and two hundred since Sivaji, the Mahratta, struck a deadly blow at the Moslem power. Many an enemy thought that the knell of the empire had sounded. And certainly, unless the re-

sources of the British Isles could be brought to bear upon the scene of revolt within a few months, the British authority would be narrowed to its three original seats—namely, the Presidency towns resting on the sea-board.

At that time there were 40,000 European troops in the country. Several thousand men on their way from England to China, at Lord Elgin's disposal, were, with his co-operation, diverted to India. Some 40,000 European soldiers were despatched from England round the Cape of Good Hope by a sea-voyage of 12,000 miles. Meanwhile the disasters at Cawnpore and elsewhere in Hindustan had been partially retrieved by Henry Havelock. At the outset a force, largely consisting of Europeans, marched against Delhi. After a severe siege of four months, the place was recaptured by assault. The communications had been maintained continuously with the Punjab, under John Lawrence, as a base whence reinforcements were derived. Native troops were raised from the loyal Punjab in place of the mutineers of Hindustan. Lucknow, for a long while after the death of Henry Lawrence besieged by rebels, was first relieved and afterward recaptured by a European force under Colin Campbell. The districts were speedily reoccupied by British authority. Though many influential individuals, some chiefs and princes, and some classes, including the worst part of the mob, had joined the rebellion, or rather the military revolt, still the mass of the people

*Confidence  
of the  
natives.*

*Siege of  
Delhi and  
relief of  
Lucknow.*

*Loyalty  
of native  
princes.*

in these districts had remained passive and readily returned to their allegiance. The principal native princes and their states had set an important example of loyalty. Within six months of the outbreak the imperial danger was surmounted, though troubles lasted here and there, and the embers smouldered for more than a year, especially in the hilly parts of the central regions. The cost of suppressing this rebellion is reckoned at forty millions sterling. Unlike all the earlier foreign dynasties, the British power had never been naturalized or domesticated in the country, but was then, as ever, recruited constantly from the British Isles. Its officers serving in the country had been born and educated in Europe, and possessed as a reserve against danger all the imperial qualities of their race.

*Causes of  
the Mutiny.*

Many causes were assigned for the Indian Mutiny. The greased cartridges served out to some of the Bengal troops operated as an immediate provocation. The Brahmins were too numerous in the ranks; they were fanatical, and they had the brains to conceive mischief when discontented. The Kabul disaster had broken the spell of invincibility. Certain chiefs near the scene of the outbreak were laboring under a sense of wrong, real or supposed. Some native states had been alarmed at British policy with regard to the right of adoption. The annexation of Oudh, however righteous in itself, had induced many Mohammedan conspirators to excite mutiny, and to turn it to political account. This brought about a very

*Effect of  
the annex-  
ation of  
Oudh.*



unusual combination between Mohammedans and Hindus. Still, these and other lesser causes would never by themselves have brought about such a crisis as that which has been described. The prime, the fundamental, cause was a large and simple fact, namely, this: The native forces were much too large relatively to the European. There was only one European soldier to six native soldiers, whereas now there is one to two. The sepoys then had the physical force in their hands, and they knew it. The distribution, too, of these excessive numbers aggravated the peril. The sepoys were, as already seen, in charge of the stations containing the state resources, civil as well as military. It was the sense of power which gave them the mind to revolt. Their interests, including employment, pay, pension, and the like, were indeed bound up with the British rule. The government was over-slow to believe that the men would revolt to the destruction of their own prospects. But their conduct proves that there are moments when religious fanaticism, national sentiment, pride, and passion will prevail over self-interest. The occurrence was only a question of time, and many will wonder why it did not happen before. But an analysis of historic circumstances would show that never before had a complete opportunity offered. Mutiny of particular bodies of troops had often occurred already, and had been overcome. Thus the British authorities came to be insufficiently alive to the symptoms which portended the events of 1857. But

*Power of  
the sepoys*

*Blindness  
of the  
authorities.*

after the storm had burst they evinced qualities rarely surpassed in the annals of the nation, and the history of the time is aglow with genius, valor, and capacity.

*Changes in  
military  
policy.*

The crisis past, no time was lost in rectifying the military faults which had rendered the revolt possible. The native troops were reduced in number, the European troops were augmented. The physical predominance at all strategic points was placed in the hands of European soldiers, and almost the whole of the artillery was manned by European gunners.

*Dominion  
of peace  
and progress.*

Peace and order having been restored to the Empire in 1858, various changes, constitutional and other, were made. The East India Company, the greatest corporation ever known to history, ceased to exist, and the government was assumed by the British crown. The army was reorganized so as to guard against the danger from which the country had just been saved. As compared with the relative proportions of former times, the European force was doubled, while the native force was reduced by more than one-third. Thus, as already seen, the European and the native were as one to two; moreover, the European was placed in charge of the strategic and dominant position, so that the physical power was now in his hands. The dominion was consolidated by the work of peace under the successive Viceroys—Elgin, Lawrence, Mayo, Northbrook—with material improvement and moral progress.

[In 1858, a Carbonaro, named Orsini, attempts to murder Napoleon III., and escapes to England. Much ill feeling results between France and England. Napoleon is frightened and turns to Cavour, promising to help expel the Austrians from Italy. The Montenegrins annihilate a Turkish invading army. Moldavia and Wallachia are formed into a single State—Roumania. The East India Company is abolished. The Treaty of Tien-tsin opens China to European trade; China recognizes Russian sovereignty over the whole of Siberia. Japan is opened to unrestricted commerce with England, France, Russia, and the United States. The Virgin is believed to appear at Lourdes. In 1859, Volunteer rifle corps are formed in England. Napoleon marches into Italy against Austria. John Brown is captured and executed for armed rebellion. Queensland is formed into a separate colony.] *Execution of John Brown.*



# NAPOLEON III. IN ITALY

(A.D. 1859)

JOHN WEBB PROBYN

THE ties which united France to Piedmont were strengthened by the marriage, in the end of January, 1859, of the Princess Clotilde, the eldest daughter of Victor Emmanuel, with Prince Napoleon, the first cousin of the French Emperor. Nor was the surmise unfounded that the marriage was accompanied with distinct political stipulations between the two governments; for an agreement was made by which the Emperor Napoleon promised to give armed assistance to Piedmont if she were attacked by Austria. The result, in case the allies were successful, was to be the formation of a northern kingdom of Italy, described as one possessed of about eleven millions of inhabitants. This agreement was not made public, but was signed on the 18th of January, 1859, by Prince Napoleon and General (afterward Marshal) Niel, on the part of the Emperor of the French, and by Cavour and General Lamarmora, on the part of Victor Emmanuel. Both

*Princess  
Clotilde.*

*Austria and  
Piedmont  
prepare  
for war.*

Austria and Piedmont increased their armaments and raised loans in preparation for war. Men of all ranks and conditions of life flocked to Turin from the other States of Italy to join the Piedmontese army or enrol themselves among the volunteers of Garibaldi, who had hastened to offer his services to the King against Austria. Instead of the confusion and division which marked and marred the uprising of Italy in 1848, there were now to be seen union and devotion under the command of that Italian prince who had, ever since he mounted the throne of Piedmont on the field of Novara, remained faithful to the constitutional liberties of his own people, and opened his country as a refuge to all Italians driven into exile for the cause of liberty. Meanwhile, diplomacy made continual efforts to avert war by endeavoring to find some solution of the difficulties and differences to which the Italian problem gave rise. In vain did other Powers seek to bring the views of the Cabinets of Vienna and Turin into agreement by means of various compromises. The gulf separating these two governments was far too wide to be thus bridged over. Then the idea of a European Congress was started. Questions at once arose as to whether Piedmont was to have a seat at the Congress, and if Piedmont, whether the other Italian States were to be admitted; again, were they to have a full or only a consultative voice in the arrangements made? Innumerable were the points of discussion which arose between Paris, London, Turin, Vienna, St. Petersburg,

*Diplo-  
macy's  
futile  
efforts.*

Berlin, not to mention the views expressed by the various little courts of the Italian peninsula. Then came the proposition of a general disarmament, by way of staying the warlike preparations which were taking over enlarged proportions. On the 18th of April, 1859, the Cabinet of Turin agreed to the principle of disarmament at the special request of England and France on the condition that Piedmont took her seat at the Congress. The Cabinet of Vienna had made no reply to this proposition. Then suddenly it addressed, on the 23d of April, an ultimatum to the Cabinet of Turin demanding the instant disarmament of Piedmont, to which a categorical reply was asked for within three days. At the expiration of the three days, Count Cavour, who was delighted at this hasty step of his opponent, remitted to Baron Kellerberg, the Austrian envoy, a refusal to comply with the request made. War was now inevitable. Victor Emmanuel addressed a stirring proclamation to his army on the 27th of April, and two days afterward another to the people of his own kingdom and to the people of Italy. When he left his capital to put himself at the head of his troops he was accompanied by the earnest goodwill of his own subjects and of the vast majority of Italians. The Emperor of the French, who had promised to aid Piedmont if Austria were the first to take an aggressive step, was faithful to his engagement. On the 30th of April, some French troops arrived at Turin. On the 13th of May, Napoleon III. disembarked at Genoa,

*General  
disarma-  
ment  
proposed.*

*Cavour's  
refusal.*

*Napoleon  
arrives  
in Italy.*

where an enthusiastic welcome was given him by the immense concourse of people assembled to witness his meeting with Victor Emmanuel, who came to receive his powerful ally.

During the diplomatic campaign, which lasted through the first four months of 1859, Count Cavour, and those who represented his sovereign abroad, played their difficult game with consummate skill; yielding whenever circumstances made it necessary to do so, however hazardous it might be; standing firm just at the moment when such a course approved itself to some, if not all, the great Powers; losing no occasion to further the cause of Piedmont, never losing sight of the end at which they aimed—that not only of securing the influence of Piedmont, but of advancing the cause of constitutional freedom, which she championed, throughout Italy, so far as circumstances permitted. The despotic rulers of Austria, baffled and annoyed, at last lost patience and sent that ultimatum to Turin which gave Count Cavour the opportunity of refusing their demands with dignity, while enabling him at once to claim the assistance which the Emperor of the French had promised if Austria were the first to take a step which made war inevitable. The real difficulty of Austria rose from her ultra-despotic system, which had received its crowning touch in the concordat concluded with the Papal See in 1855—a concordat to which no former ruler of Austria would have consented, so greatly did it fetter

*Austria's  
false step.*



and restrict the imperial power. The Italian subjects of Austria hated her rule, as did the subjects of those Italian princes whom she upheld. Hungary had never ceased to desire the restoration of her ancient constitutional rights. The freedom and order of Piedmont only increased the dislike felt by Italians to Austria, and so enhanced her difficulties. The Government of Vienna thought to cut the Gordian knot of its perplexities by war. It had just committed, by its precipitate ultimatum, a diplomatic blunder which its able adversary availed himself of without delay. It now went on to commit a military blunder; for, although the Austrian armies proceeded to cross the Ticino and invade the Piedmontese territory, they failed to make a decisive march on Turin. Had Count Giúlay, the Austrian commander, done so without hesitation, he might well have reached the capital of Piedmont before the French had arrived in sufficient force to enable the little Piedmontese army to arrest the invasion. As it was, the opportunity was lost never to occur again. In the first engagements at Montebello and Palestro the advantage rested decidedly with the allies. It was at this last-named battle that Victor Emmanuel, by his bold bearing and courage, excited the admiration not only of his own soldiers, but also of the French Zouaves, who were among the best troops of France. On the 4th of June, the French fought the battle of Magenta, which ended, though not without a hard struggle, in the defeat of the Austrians. On the 8th, the

*Austria's  
difficulties*

*Her  
military  
blunder.*

*Battle of  
Magenta.*

Emperor Napoleon and King Victor Emmanuel entered Milan, where they were received with a welcome as sincere as it was enthusiastic. The rich Lombard capital hastened to recognize the King as its sovereign. While there he met in person Garibaldi, who was in command of the volunteer corps, whose members had flocked from all parts of Italy to carry on, under his command, the war in the mountainous districts of the north against Austria. The cordial and frank bearing of the monarch and his single-hearted devotion to the national cause made the deepest impression on the Italian patriot. Indeed, Garibaldi felt from that moment the utmost confidence in the King; nor was it ever shaken throughout the difficulties, dangers, and trials which beset the progress of Italian freedom until its final victory in Rome.

*Meeting  
of Napo-  
leon and  
Garibaldi.*

The allied troops pursued their march onward toward the river Mincio, upon whose banks two of the fortresses of the famous Quadrilateral are situated. On the 24th of June they encountered the Austrian army at Solferino and San Martino. French, Piedmontese, and Austrians fought with courage and determination. Nor was it until after ten or eleven hours of hard fighting that the allies forced their enemy to retreat and took possession of the positions they had occupied in the morning.

*Battle of  
Solferino.*

The French and Piedmontese armies had won the battle of Solferino, and driven the enemy across the Mincio; their fleets were off the lagoons of Venice, and were even visible from the lofty Campanile of St. Mark's. Italy was

A.D. 1859

## NAPOLÉON III. IN ITALY

throbbing with a movement of national life daily gathering volume and force. Europe was impatiently expecting the next move. It took the unexpected form of an armistice, which the Emperor of the French proposed, on his sole responsibility, to the Emperor Francis Joseph on the 8th of July. On the 12th, the preliminaries of peace were signed at Villafranca. Victor Emmanuel was opposed to this act of his ally, but was unable to prevent it. *The Peace of Villafranca.*

[In 1860, Napoleon obtains Savoy and Nice. Spain gains territory from Morocco. The second Maori war breaks out. The Druses massacre the Maronites, the Mohammedans massacre the Damascus Christians, and order is restored by a French army. South Carolina dissolves its union with the United States. Speke and Grant determine the Victoria Nyanza to be the true source of the Nile. Garibaldi invades Sicily.] *South Carolina secedes.*



# END OF THE POPE'S TEMPORAL POWER AND UNIFICATION OF ITALY

(A.D. 1860-1870)

ROBERT MACKENZIE

AT the close of the war, Naples, containing a population of nine million, was still ruled by a Bourbon, who maintained over the unhappy people a shameful despotism. The Neopolitans were quick, intelligent, and good-natured—a people capable of high civilization, but cruelly debased by centuries of wicked government. They were ignorant, idle, superstitious, and without just ideas of right and wrong. *State of the kingdom of Naples.*

Ferdinand II. was then King, the last of a line of tyrants. His government was regarded with abhorrence by his subjects, and with strong disapproval by Europe. Some years before an eminent English statesman, Mr. Gladstone, had visited Naples. He was led to make inquiry into the relations maintained by the Government with those of its subjects who were supposed to be distressed. He gave to the world the result of his researches *Ferdinand's despotism. Mr. Gladstone's letters.*

*Prison  
horrors.*

in letters addressed to Lord Aberdeen. He showed that there were probably twenty thousand persons held in prison by the Neapolitan Government for political reasons; that men were habitually arrested without any offence being charged, simply because the Government desired to have them out of the way; that unoffending citizens were imprisoned for years, without trial, among the vilest criminals, often in heavy irons, which were never for a moment removed; that the dungeons were dark, airless, crowded, inexpressibly filthy, and often so low-roofed that the prisoners could not stand erect; that the doctors refused to enter these loathsome cells, and caused such prisoners as required medical care to be brought out to them; that the police habitually inflicted torture; that trial was a mockery of justice; that prisoners who had the rare good fortune to be acquitted were liberated only if the Government pleased.

*The  
Neapolitan  
Govern-  
ment replies  
to Glad-  
stone.*

These revelations brought upon Naples the reprobation of the civilized world, and left her, in an age of revolution, without a friend. Lord Palmerston sent copies of Mr. Gladstone's letters to the British ministers at all European courts. The Neapolitan Government felt so acutely the damage done to its reputation that it caused a reply to be prepared, which, as Mr. Gladstone showed, virtually admitted the substantial accuracy of his statements.

The great events which had come to pass in northern and central Italy sent their thrilling influences among

the people of the south. An insurrection broke out in Sicily (1860). General Garibaldi summoned about him two thousand men, old soldiers of liberty, and sailed from Genoa, to strengthen and direct the movement. His battle-cry was to be, "Italy and Victor Emmanuel." The King's Government was not a little embarrassed by this invasion in the King's name of the territory of a friendly power. Cavour, who had just returned to office, pronounced it the most difficult conjuncture in which he had ever been placed. He could not, without the sanction of France, give encouragement to the conquest of Naples. But the people of the north felt deeply the wrongs of their brethren in the south, and would not suffer any effort for their deliverance to be thwarted. The Government officially disapproved of Garibaldi's expedition, but stood prepared to accept the advantages which its success would offer. After a little the King himself wrote to Garibaldi, begging him to desist. The general replied, with many loyal and dutiful assurances, that he was called for and urged on by the people of Naples; that he endeavored in vain to restrain them; that the King must, on this occasion, permit him to be disobedient. But when it became evident that marvellous success was to crown the patriot efforts, Cavour's difficulty vanished. It was necessary that Sardinia should assume the leadership of a great national movement. Otherwise the unity of Italy would have been endangered.

*Garibaldi's  
expedition*

*Cavour's  
dilemma.*

*Triumph  
of the  
rebellion.*

Garibaldi quickly possessed himself of Sicily. He crossed over to the mainland and began his advance to Naples (August 19). His march was a triumphal progress. The troops of the King retired as he drew near; the rejoicing people hailed him as their deliverer. They gave expression to their rapture by illuminations. They brought gifts of fruit and wine to the soldiers. They embraced, with Italian demonstrativeness, the rugged and travel-stained heroes. Garibaldi pressed forward rapidly, and in three weeks he entered Naples. The King and Queen fled on his approach. The people received him with enthusiasm, such as the ancient city had probably never witnessed before.

*Union with  
Sardinia.*

A portion of the Neapolitan army made a stand on the Volturno, where Garibaldi inflicted upon it final defeat. Garibaldi became for a time dictator, and governed Naples. The people were asked to declare their wishes in regard to their political future. They voted, by vast majorities, in favor of union with Sardinia. The King, in accepting the new trust, summoned the people to concord and self-denial. "All parties," he said, "must bow before the majesty of the Italian nation, which God uplifts."

Garibaldi did not remain in the kingdom which he had won. He cherished against Count Cavour a bitter antipathy, and sought to have him dismissed from office. He intimated in the official gazette of Naples his determination never to be reconciled with the man who





had sold an Italian province. He felt that he was not in harmony with the political conditions which surrounded him. In three months he had overthrown a despotic Government, and added a population of nine million to the free kingdom of Italy. And now his work was done. Unostentatiously he quitted the land which he had saved, and returned in poverty to his little island of Caprera. *Garibaldi retires to Caprera.*

The foundations of Italian unity had been laid by the judicious interference of Sardinia in the strifes of the great European powers. A judicious repetition of the same strategy was once more to yield results of the highest value to the national cause (1866). In course of years it became obvious that questions had arisen between Austria and Prussia which could not be solved otherwise than by the sword. Austria's extremity was Italy's opportunity. A treaty was arranged by which Prussia bound herself not to make peace with Austria until Venetia should be gained for Italy. King Victor Emmanuel engaged, on his part, to attack Austria on land with eighty thousand men, and at sea with all his naval force. On both elements he was unsuccessful: the Austrians defeated his army and his fleet. But better fortune crowned the arms of Prussia. Two days after the battle of Sadowa, it was announced that Austria had ceded Venetia to France, thus, it may be supposed, lessening in some slight degree the humiliation which her final expulsion from Italy involved. The Emperor Napoleon gracefully handed his acquisition to the Italian Government. It had *Italy's opportunity.*

always been his purpose, he intimated, to restore Italy to herself, so that she should be free from the Alps to the Adriatic, and this programme was now all but completed.

*Rome's  
perilous  
position.*

The sole remaining obstacle was the Pope. The Holy Father still bore rule over the city of Rome and a considerable portion of those regions which the Church claimed to possess as the patrimony of St. Peter. To north and south lay the now united states which made up free Italy. Wedged in between was a population of half a million of Italians longing to be united with their countrymen, enduring impatiently a government which they believed to be the worst in Europe. This was a condition whose continuance was impossible. Italy could not tolerate, in the very heart of the kingdom, an alien state with a blindly despotic government and a discontented population. Moreover, Rome was the inevitable capital of united Italy.

*Protected  
by France.*

But the tottering throne of the Pope was still upheld by French bayonets, and the "eldest son" of the Church gave ominous warning to the Italians that his filial duty was to be inflexibly discharged. The King of Italy was firmly bound by a convention with France, not only to abstain from making any attack upon the territory of the Holy Father, but also to resist such attack if made by others. And when the Italian Government manifested some disposition to forget that agreement, the Emperor

Napoleon sternly intimated that France was prepared to insist upon its fulfilment.

But events proved stronger than the Emperor Napoleon. The impatience of the Italian people became irrepressible. Insurrection burst out in Rome. Garibaldi gathered around him a band of unlicensed liberators, most of whom fell into the hands of the French and Papal troops. The Italian question became again a cause of European anxiety. Queen Victoria (November 19, 1867) expressed to Parliament her hope that the Emperor would, by the early withdrawal of his troops, remove any possible ground of misunderstanding between himself and the King of Italy. A week or two later the French quitted Rome, but next day the French Government intimated angrily that "France would never submit to such a violence on her honor and on Catholicity" as the occupation of Papal territory by the Italians.

*Insurrection in Rome.*

Three unquiet years passed, bringing vast changes. The Emperor Napoleon was a prisoner in the hands of the Prussians; his armies, shamefully defeated, had found refuge in surrender; the King of Prussia was setting out on his triumphal march to Paris; the Church was bereaved of her "eldest son." Undutiful Italy did not neglect the opportunity. Her troops forced an entrance into Rome (September 20, 1870). The Empress of France exclaimed, "Rather the Prussians in Paris than the Italians in Rome." The Archbishop of Paris foretold approaching desolation. "Revolution," he said, "will

*End of the Papal temporal power.*

*Italy seizes her opportunity.*

overwhelm the world, and God will know how to create a new order out of its chaos." But neither prophecy nor malediction shook the steady purpose of the Italian people. The subjects of the Pope joyfully united themselves with their countrymen, and the liberation of Italy was at length a completed work.

*Outbreak  
of the  
Civil War.*

[In 1861, the Czar Alexander frees the serfs. The American Civil War breaks out.]

# THE EMANCIPATION OF THE SERFS

(A.D. 1861)

ROBERT MACKENZIE

UNDER the rule of his successor the despotic system of Nicholas was to an important extent departed from. The newspaper press experienced sudden enlargement. So urgent was the demand for political discussion, that within a year or two from the close of the war seventy new journals were founded in St. Petersburg and Moscow alone. The government censors discharged their functions with the mildness which the liberal impulses of the time demanded. For a brief space the press enjoyed a virtual freedom from restraint, and availed itself boldly of the unprecedented opportunity. Western Europe had been shut out by the Emperor Nicholas. Its liberal ideas, the history of its recent political revolutions, its marvellous progress in science and the arts—all were unknown to the Russian people. Educated Russians were eager to acquaint themselves with this long-forbidden knowledge; and a crowd

*Enlargement of the Press.*

*Backwardness of Russia.*

of journalists, burning with a love of liberal ideas, hastened to gratify the desire. An enfranchised press began to call loudly for the education of the people, for their participation in political power; for many other needful reforms. Chief among these, not merely in its urgency, but also in its popularity, was the emancipation of the serfs.

*Abolition  
of serfs  
long con-  
templated.*

Forty-eight million Russian peasants were in bondage—subject to the arbitrary will of an owner—bought and sold with the properties on which they labored. This unhappy system was of no great antiquity, for it was not till the close of the Sixteenth Century that the Russian peasant became a serf. The evil institution had begun to die out in the west before it was legalized in Russia. Its abolition had long been looked forward to. Catherine II. had contemplated this great reform, and so also had her grandson, Alexander I.; but the wars in which they spent their days forbade progress in any useful direction. Nicholas very early in his reign appointed a secret committee to consider the question; but the Polish insurrection of 1830 marred his design. Another fruitless effort was made in 1836. In 1838, a third committee was appointed, but its work was suspended by “a bad harvest,” and never resumed. Finally, it was asserted that the dying Emperor bequeathed to his son the task which he himself had not been permitted to accomplish.

*Alexan-  
der's in-  
herited task.*

And thus it came to pass that when Alexander II.

ascended the throne, the general expectation of his people pointed to the emancipation of the serfs. The Emperor shared in the national desire. At his coronation he prepared the somewhat reluctant nobles for the change which to many of them was so unwelcome. A little later he nominated a committee, chosen from the proprietors, whose duty it was to frame, in accordance with certain principles laid down for their guidance, the details of this great revolution. Three years followed of discussion, adjustment, revision, and then the decree was published which conferred freedom upon nearly fifty million Russian peasants. *The decree published (1861).*

The position of the Russian serf, although it had much to degrade, was without the repulsive features of ordinary slavery. The estate of the Russian landowner was divided into two portions. The smaller of the two—usually not more than one-third—was retained for the use of the proprietor. The larger was made over to the village community, by whom it was cultivated, and to whom its fruits belonged. The members of that community were all serfs, owned by the great lord and subject to his will. He could punish them by stripes when they displeased him; when he sold his lands he sold also the population. He could make or enforce such claims upon their labor as seemed good to him. Custom, however, had imposed reasonable limitations on such claims. He selected a portion of his serfs to cultivate his fields and form his retinue. The remainder divided their time *Position of the Russian serf.* *Opportunities for advancement.*

equally between his fields and their own: three days in each week belonged to their master, and three days belonged to themselves. Many of them purchased, for a moderate payment, the privilege of entire exemption from the work of their owner. It was customary for these enterprising bondmen to settle in the nearest city, where occasionally they attained to wealth and consideration. Instances have occurred of wealthy bankers and merchants who still remained the property of a master, to whom a humiliating recognition of their servile estate was periodically offered.

The lands which were in possession of the villagers were divided by lot among the separate families. As the number of claimants fluctuated, a fresh division was made every ninth year. A villager never lost his right to participate in the common inheritance. He might be absent for years, seeking his fortune in the city, but when it pleased him to return and claim his interest in the lands of his native village, the claim could not be resisted.

*Law of  
emancipation.*

The law of emancipation bestowed personal freedom on the serfs. For two years those who were household servants must abide in their service; receiving, however, wages for their work. Those who had purchased exemption from the obligation to labor for their lord were to continue for two years the annual payment. At the end of that time all serfs entered on possession of unqualified freedom.



The villagers continued in occupation of the lands which they had heretofore possessed; but they became bound to pay a purchase-price or a sufficient equivalent in rent or in labor. The continued occupation was not voluntary, but compulsory; and no peasant may withdraw without consent of the whole community, which, in the northern parts of the Empire, is gained only by purchase. The lands thus acquired are not owned by individuals, but by the community. All obligations to the former proprietor or to the State are obligations of the associated villagers. The land system of the greater portion of Russia is thus a system of communism. The industrious villager is the co-obligant of the idle and vicious. The motive which impels a man to the careful cultivation of his land is weakened by the knowledge that in a short time he will have to change fields with his neighbor. The peasant is assured of a maintenance which no misconduct on his part can alienate, but he is left almost without hope of rising to a better position. The portion of land assigned to him furnishes only partial employment. Recent changes in the excise laws bring stimulants within easy reach of all. Promoted by idleness, ignorance, and abundant opportunity, drunkenness has fearfully increased since the abolition of serfdom. The indolent peasant works reluctantly for hire to his former lord. Notwithstanding an abundance of laborers, there is a serious insufficiency in the supply of

*Compulsory occupations.*

*System of communism.*

*Increase of drunkenness.*

labor. It is believed that over much of the country the productions of agriculture are diminishing.

[In 1862, the Greeks expel their King, Otto. George, the second son of the King of Denmark, is chosen by England to take his place; representative institutions are established. Napoleon begins his aggressive schemes on Mexico. Farragut captures New Orleans; the *Alabama* leaves the Mersey, notwithstanding protests; the Federals are repulsed at Bull Run; Lee invades the North and then retreats; the *Merrimac* is worsted by the *Monitor*; Annam cedes part of Cochin China to France.]

Farragut  
captures  
New  
Orleans.

Monitor  
and  
Merrimac.

# THE POLISH INSURRECTION

(A.D. 1860-1863)

ALFRED RAMBAUD

GREAT hopes awakened in Poland at the accession of the new sovereign; they went as far as the re-establishment of the Constitution, and even to the reunion of the Lithuanian provinces with the kingdom. The awakening of Italy had made that of Poland appear possible; the concessions of the Emperor of Austria to Hungary led men to expect the same from Alexander II. The interview of the three northern sovereigns at Warsaw, in October, 1860, caused a certain irritation among the people. It is necessary also to take into consideration the intrigues set on foot by the Polish committees abroad. If many Poles counted on the support of Alexander II. to help them to raise their country, others wished to emancipate her entirely from Russia. There existed, therefore, two parties, in Warsaw and in the foreign committee; the one wished to take Italy as an example, the other would be content with the new lot of Hungary. The emancipation of the

*Poland's hopes.*

*Two parties.*

peasants was in Poland, as in Russia, the question of the day, but the conditions of the question were different in Warsaw from what they were in Moscow; the personal liberty of the rustics had been decreed by Napoleon I., at the time that the Grand Duchy was created; but as they had received no property, they continued to farm the lands of the nobles, and paid their rent either in money or by *corvées*. The substitution of a fixed money payment instead of a *corvée* was the first step in the path of reform, which might be carried further by allowing the husbandman to become a proprietor, by paying annually a fixed sum toward the repurchase of the land, and putting means of credit at his disposal. The Agricultural Society, presided over by Count Andrew Zamoi-ski, found that it was the interest of the Polish nation to anticipate the Russian Government, and to secure to the native nobility the honor of emancipation; the Government, on the contrary, represented by M. Monkhanof, director of the Interior, decided that it was to its advantage to fetter the activity of the society, to forbid the discussion of the question of repurchase, and to confine its functions to the mutation of the *corvée* into fixed dues.

*Policy of  
the Agri-  
cultural  
Society.*

*Agitation  
at Warsaw.*

The contest between the Agricultural Society and the Government increased the agitation which already existed at Warsaw. On the 29th of November, 1860, on the occasion of the thirtieth anniversary of the revolution of 1830, demonstrations at once national and religious took place in the streets of the capital, and por-

traits of Kosciuszko and Kilinski were distributed. On the 25th of February, 1861, the day of the anniversary of the battle of Grochov, the Agricultural Society held a meeting to deliberate on an address in which the Emperor should be asked for a constitution. Tumultuous crowds gathered in the streets, singing national songs. On the 27th, on the occasion of a funeral service for the victims of the preceding insurrections, there was a new demonstration, which had to be suppressed, with the loss of five killed and ten wounded. Prince Gortchakof, Viceroy of Poland, touched by these strange manifestations, in which the disarmed people confined themselves stoically to facing the musketry without interrupting their songs, labored with Count Zamoiski for the restitution of order. The address to the Emperor was circulated in Warsaw, and was covered with signatures; 100,000 persons quietly followed the obsequies of the victims of the 27th of February.

*Address  
to the  
Emperor.*

Without desiring to grant a constitution, the Emperor Alexander II. made, however, many important concessions. He decreed (edict of March 26) a council of state for the kingdom, a department of public education and of worship, elective councils in each government and each district, and municipal councils at Warsaw and in the principal cities of the kingdom. The Marquis Viélepolski, a Pole belonging to the party which hoped for the re-establishment of Poland by Russia, was named director of public worship and education.

*Dissolu-  
tion of  
the Agri-  
cultural  
Society.*

These concessions were likely to reconcile at least the constitutional party; unhappily, their effect was destroyed by the sudden dissolution of the Agricultural Society, in which the mass of people had placed its hopes, and the demonstrations continued. On the 7th of April a crowd assembled in the square of the *Zamok* (castle of the Viceroy) to demand that the edict of dissolution should be withdrawn, but it dispersed without any result before the hostile attitude of the troops. On the 8th of April the multitude reappeared, more numerous and more violent, shouting that they wanted a *country*; a postilion, who was driving a postchaise, played on his cornet the favorite air of Dombrowski's legions, "No, Poland shall not perish." The crowd, composed in great part of women and children, presented a passive resistance and invincible *vis inertiae*, on which the charges of cavalry had no effect. The troops then had recourse to their arms, and fifteen rounds of shot laid 200 dead and a large number of wounded at the feet of the statue of the Virgin. On the following days the people appeared only in mourning, in spite of the prohibition of the police. This uneasy state of things was prolonged for many months. On the 10th of October a Polish and a Lithuanian procession celebrated at Hodlevo, on the Polish-Lithuanian frontier, the four-hundredth anniversary of the union of the two countries. The humanity of the Russian commandant allowed the fête to be held without the effusion of blood.

*Massacre  
by the  
troops.*

The Government still made one attempt at conciliation when the Emperor appointed Count Lambert as Viceroy, with orders to apply the reforms decreed in March, 1861, but the effect of his nomination was weakened by the presence at his side of men devoted to the policy of repression. The anti-Russian party, besides, had not disarmed. On the 15th of October, on the anniversary of Kosciuszko, the people flocked to the churches of Warsaw; the military authorities caused the churches to be surrounded by detachments, without seeing that the inoffensive inhabitants, alarmed at the display, would refuse to leave the churches, and that it would be necessary to drag them out by force. In fact, after a useless blockade that lasted a day and a night, up to four in the morning, the soldiers had to force the cathedral, and carry 2,000 people to the fortress. Count Lambert loudly complained to General Gerstenszweig, the military governor. After a fierce altercation, the latter blew out his brains, and Lambert was recalled.

*Count  
Lambert  
appointed  
Viceroy.*

He was succeeded by Count Lüders, who began a period of reaction, and a certain number of influential Warsawians were transported. The Grand Duke Constantine, made Viceroy on the 8th of June, 1862, again tried a policy of reconciliation. Viélépski, one of the promoters of the address to the Emperor, was nominated chief of the civil power. Enthusiasts attempted the lives of Lüders, of Viélépski, even of the Grand Duke, and violent men profited by all the errors of the Govern-

*Count  
Luders*

*Podolian  
agitators  
are arrested.*

ment to push things to extremity, and to turn its good intentions against it. The Poles of Warsaw committed the error of disquieting Russia about the provinces which she regarded as Russian, and an integral part of the empire; the proprietors did not content themselves with demanding in an address to Constantine, that the Government of Poland should be Polish, which was reasonable and just, but insisted that the Lithuanian palatinates should be reunited to the kingdom. The upper classes of Podolia expressed the same wish with regard to that province, to Volhynia and the Ukraine. These imprudences caused the exile of Zamoiski and the arrest of the Podolian agitators. All understanding became impossible; an exercise of authority precipitated the explosion; in the night of the 15th of January, 1863, the military Government laid violent hands on the recruits.

*Guerrilla  
warfare.*

The conscripts who had escaped from the police formed the nucleus of the rebel bands which promptly appeared at Blonié and at Siéroçk. The war could no longer assume the great character of those of 1794 or of 1831; there was now no Polish army to struggle seriously with that of Russia: it was a little war of guerrillas and sharpshooters, who could nowhere hold their own against the Russians, but who plunged into the thick forests of Poland, and concealed themselves there, only to appear further on and harass the columns. There were no battles, only skirmishes, the most serious of which was that of Vengrov, on the 6th of February,



1863. A few chiefs made themselves names: among these were Leo Frankovski, Sigismond Padlevski, Casimir Bogdanovitch, Miélencki, the energetic Bossak-Hauke (who was one day to fall under the French flag in the fields of Burgundy); the French Rochebrune and Blankenheim, Mademoiselle Poustovoiiov, Siérakovski (ex-colonel in the Russian army, who was hanged after his check in Lithuania); the priest-soldier, Maçkiévicz, Narbutt (son of the historian); Lélével (a pseudonym adopted by a Warsaw workman), and Marian Langiévicz, soon appointed dictator, but who, after the skirmishes of the 17th, 18th, and 19th of March, was driven back into Galicia, and detained there by the Austrians. The secret committee of insurrection, or anonymous government of Poland, had summoned the peasants to liberty and the enjoyment of property.

The exasperated Russians treated the towns and villages concerned in the affair with great cruelty. The village of Ibiány was destroyed, and the Polish chiefs taken with arms in their hands were shot or hanged. General Mouravief in Lithuania declared that it was "useless to make prisoners." Berg in Poland, Dlotovskoi in Livonia, and Annenkof in the Ukraine, were the agents of a rigorous repression. Felinski, Archbishop of Warsaw, was transported into the interior of Russia, as a punishment for having written a letter to the Emperor.

*Cruelty  
of the  
Russians.*

Europe was touched. On the 5th of January, 1863, the French minister, Billault, in the tribune of the Corps

*Interven-  
tion of  
European  
Powers.*

*Conditions  
required.*

Législatif, had blamed the "baseless hopes excited in the minds of patriots, whose powerless efforts could only bring about new evils;" he recommended the insurgents to the clemency of Alexander. Then France, England and Austria decided to have recourse to diplomatic intervention, invited the other Powers who had signed the Treaty of Vienna to join in their efforts, and laid before the Russian Government the notes of April, 1863, which invited her to put an end to the periodical agitations of Poland by a policy of conciliation. On June 17, the three Powers proposed a programme with the following conditions: 1. An amnesty; 2. The establishment of a national representation; 3. The nomination of Poles to public offices; 4. The abolition of restrictions placed on Catholic worship; 5. The exclusive use of the Polish language, as the official language of the administration, of justice, and of education; 6. A regular and legal system of recruiting. This intervention of the Western Powers, which was supported by no military demonstration, was rejected by the famous note of Prince Gortchakof, Chancellor of the Empire, and the idea of a European conference was likewise rejected. Europe found herself powerless, and Napoleon III. had to content himself in his speech from the throne with the declaration that the treaties of 1815 were "trampled under foot at Warsaw." The conduct of Prussia had been quite different; she had concluded with Russia the convention of the 8th of February, 1863, for the suppression of the Polish mani-

festations, and thus laid the foundation of that Prusso-Russian alliance which was to prove so useful to her.

This insurrection was to cost Poland dear. The last remains of her autonomy were extinguished. To-day, the "kingdom" is nothing but a name, and the country has been divided into ten provinces (1866). The Russian language has replaced the Polish in all public acts; the University of Warsaw is a Russian university; the primary, secondary, and superior education all lend their aid to the work of denationalization. Poland lost her institutions without obtaining the benefit of those of Russia—the *zemstva*, the jury, and the new tribunals. As the Government held the nobles responsible for the insurrection, it therefore markedly favored the peasants, authorizing them to "enter into full and entire possession of the lands which they held." An oukaze of the 10th of December, 1865, rendered the sale of confiscated and sequestered property imperative, and Russians alone might be purchasers.

*Extinction  
of Poland.*

Finland, on the contrary, had all her privileges confirmed. In 1863, Alexander convoked the diet of the grand duchy, the second that had been held since the annexation to the Empire. The German nobility of the Baltic provinces, more docile and more politic than that of Poland, were not disturbed. The University of Dorpat remained a German university; the Government only took measures to protect the language and religion of the Empire against the propagation of the German tongue

*Finland's  
privileges.*

*Govern-  
ments un-  
changed.*

and of the Protestant religion. The bold demands of the Slavophil Iouri Samarine, in his *Russian Frontiers*, and the lively polemic sustained against him by the Baltic writers—Schirren, Wilhelm von Bock, Julius Eckart, and Sternberg—did not lead to any important changes in the three Governments of Livonia, Courland, and Esthonia.

# THE FIGHT BETWEEN THE "MONITOR" AND THE "MERRIMAC"

(A.D. 1862)

JAMES SCHOULER

ON the same day that Johnston's retreat from Manassas was made known at the White House, a sea encounter occurred at Hampton Roads, off Fortress Monroe, which revolutionized in effect the naval warfare of the civilized world. This was the ironclad combat of the *Monitor* and *Merrimac*. On both sides American inventive genius had been at work over armor-plated vessels and the use of the ram, public appropriation having been made for experiments. At the Tredegar works in Richmond, the *Merrimac*, rescued by its captors when Gosport navy yard burned, was converted into an ironclad. A wedge-shaped prow of cast-iron projected about two feet in front of this vessel; while a wooden roof, sloping to the water's edge, was covered with two iron plates of armor, inside of which was placed a battery of ten guns. On the Union side, the

*Appropriations for experiments.*

*Ericsson  
plans the  
Monitor.*

Navy Department, from the plans submitted, chose that of John Ericsson, of New York, a man of scientific acquirements, Swedish by birth, but an American by adoption. His *Monitor*, a craft of careful model and superior workmanship, seemed almost providentially constructed to engage the clumsier *Merrimac*, at the right moment. For sea service it was defective; but in light draught and nimbleness of motion it was well suited for shoal harbors and rivers. Like a "cheese-box on a raft," as well described by the Union press, this ironclad presented only a thin edge of surface above and below the water line, while an iron turret revolved in sight from which two large guns might be rapidly trained and fired.

Three wooden Union frigates of the older pattern lay at anchor under the guns of Fortress Monroe, and two others near Newport News, further within the bay, when about noon on Saturday, March 8th, this reconstructed *Merrimac* plowed suddenly toward them from the mouth of the James River near Norfolk, under an armed convoy. The three nearest frigates slipped their cables at once, expecting an easy encounter; but, being all of deep draught, they soon ran aground in low water. From Newport News the two other frigates, with shore batteries besides, opened fire upon this strange craft, which looked like some huge, half-submerged crocodile; but, to their amazement, the iron hail bounded from the sloping back of the dark leviathan like rubber balls. On came the monster, and crashed her iron prow into

the *Cumberland*, which sank in forty-five minutes, carrying down officers and crew; and the colors still floated at her masthead as the *Merrimac*, hovering about her, sent shot into the defenceless hull. Next, turning upon the *Congress*, which had made for shore, the *Merrimac* took up a raking position and riddled her with hot shot and shells, until after fearful carnage that vessel burned until midnight, when explosion of the magazine made an end of her. Drawing off at dusk, the iron champion returned with its convoy to the Norfolk side and anchored under the guns of Confederate batteries until morning.

*The Merrimac's  
victory,  
March 8,  
1862.*

The day's news carried consternation to Washington. This strange and terrible engine of war, impervious to our heaviest shot, what irreparable damage might it not inflict? Two of the three frigates that had run aground were with difficulty drawn off; but the *Minnesota*<sup>1</sup> stuck fast, the first probable victim of the next daylight. Deliverance was providentially at hand, neither summoned nor sent for. By the light of the burning *Congress* the puny *Monitor* from New York was towed into Hampton Roads late that very evening, and, under the brave Lieutenant John L. Worden, took station near the stranded frigate. On Sunday morning the *Merrimac* approached, like a Goliath, sure of the prey; but the pygmy, like David, advanced to meet her. A single combat of three hours ensued, which spectators lining

*Consternation  
in Wash-  
ington.*

<sup>1</sup> Twin frigate to the original *Merrimac*.

*The duel of  
March 9.*

both shores viewed with prolonged wonder and eagerness. It began a duel of the invulnerables, and ended with no obvious impression made on either adversary; but the lighter craft, by forcing the heavier to withdraw, gained the essential victory. The *Merrimac* was twice the *Monitor's* length and breadth, and carried five times as many guns. Her great draught compelled her to manœuvre in deep water, while the Ericsson craft, drawing only ten feet, could run where she pleased and bring her guns to bear upon an iron target far broader than her own. The *Merrimac* began leaking, and there was danger of penetrating the joints of her armor; she rushed in vain to sink the agile foe, having lost her iron prow the day before; and, just as the second in command on the *Monitor* relieved Worden, who had received a slight injury while in the pilot-house, the *Merrimac* started on her retreat, refusing further fight.<sup>2</sup>

*The Mer-  
rimac  
withdraws.*

Wooden walls, however, won the victory at New Orleans; and gunboats on our Western rivers, only partially protected with iron chains or plates, did good service against the more imposing, but ill-built Confederate rams and armor-plated craft, which never did such deadly work again nor caused such terror as on this first occasion. The valiant *Monitor* soon lent her name to a whole Union fleet, built after the turreted model, which

<sup>2</sup> The *Merrimac's* engines were poor, and fear was felt of a falling tide. The pilot-house arrangement of the original *Monitor* was afterward improved.



A.D. 1862

“MONITOR” AND “MERRIMAC”

operated before Charleston and Richmond; and, the world over, naval ingenuity entered upon a new era of invention, which has hardly yet, at this late day, perfected its experiments.

*The Monitor is accepted as a model.*



# RISE AND FALL OF THE MEXICAN EMPIRE

(A.D. 1863-1867)

JULES GAUTIER

**N**APOLEON III. dreamed of founding in Mexico a Latin empire which would counterbalance the influence of the United States, and pursued this project in accord with the clerical conservative party. When he learned of the convention of the soledad he sent to Mexico a brigade of 4,500 men under General Latrille de Lorencez, accompanied by General Almonte, son of the patriot Morelos and one of the heads of the conservatives. With him came Father Miranda and other notable priests. Juarez gave the order to arrest "the traitors and reactionaries," and the representatives of Spain and England, Prim and Wyke, demanded that Almonte should be sent back. Jurien de la Gravière refused, and in April the English and Spanish corps evacuated Mexico.

*Napoleon's  
ambitions  
for found-  
ing a Latin  
empire.*

On April 16, the French published a strange manifesto in which they declared they had come to Mexico

*The French  
manifesto.*

to put a stop to the divisions of the country. This was war. A Conservative revolution was counted upon, but it did not take place; Almonte and Miramon could only group 5,000 adherents around the foreign camp; not a town opened its gates. Juarez issued a decree calling all men to arms from twenty-one to sixty years, and threatening with death any who gave aid to the enemy. On April 28, De Lorencez forced the passage of the mountains at Cumbres, and on May 5 attacked Puebla, which Zaragoza defended with 12,000 men; he was repulsed and lost 476 soldiers. On May 18, a defeat of the Mexicans at Bananceseca by the French compensated for this check. The French army remained at Orizaba, maintaining with difficulty its communication with Vera Cruz. It received supplies from a new commandant, General Forey, who landed in August with 30,000 men, and climbed slowly toward Orizaba, where he dissolved the pseudo-government organized by Almonte (October, 1862). He established a line of communication with Vera Cruz, and on May 16, 1863, began the siege of Puebla; Zaragoza was dead; Ortega defended the place with 22,000 men, while Comonfort covered Mexico. The siege was terrible; they had to take each *cuadra* (square of houses) one by one. Despite cholera and typhus, the besieged held out three months; finally, on May 8, Comonfort's army was dispersed by Bazaine at San Lorenzo; on the 17th, Ortega surrendered himself after having spiked his 150 cannon, broken his arms and

*The siege  
of Puebla.*

*Cholera  
and typhus.*

scattered his powder; 26 generals, 1,000 officers and 11,000 soldiers were taken prisoners. Juarez left Mexico on May 31, retiring to San Luis de Potosi. Bazaine entered the capital on June 7th. The French entered Mexico City in triumph with the acclamations of the people; an assembly of thirty-five notable conservatives was reunited and restored the authority to the triumvirate of Almonte, De Labastida, Archbishop of Mexico, and General Marianno Salas, a former lieutenant of Santa Anna. They convened 250 notables under the name of a Constituent Assembly, to deliberate, and on June 10 made this illegal, unelected body vote the following resolution: "The Mexican nation adopts for form of government a temperate and hereditary monarchy, under a Catholic prince; the sovereign will take the name of Emperor of Mexico; the imperial crown will be offered to the Archduke Maximilian of Austria, for himself and for his descendants."

*Bazaine enters the capital.*

*Resolution of the Assembly.*

At first, circumstances seemed favorable to the Napoleonic combination. Forey, appointed a marshal, returned to France, leaving the command to Bazaine (October 1, 1863). The latter made rapid operations with the help of the Conservative bands of the Marquez and Mejia. The Liberal armies were broken up; there remained little else than guerrillas, reinforced by the remnants of the troops of Comonfort and the fugitives from Puebla; the nucleus of the regular army was composed of pressed Indians, serving indifferently under

*The Liberal forces.*

any flag; as for the guerrillas, formed of bands of volunteers or *vaqueros* grouped around their proprietaries, they were divided between the Liberals and reactionaries. The two principal leaders of the revolutionary cause were Juarez in the north and Porfirio Diaz in the south.

*The United  
States re-  
fuses aid.*

Bazaine gathered the Mexicans in two columns under General Douai and General Cartaguy, and had Colonel Dupin organize some contra guerrillas. San Luis de Potosi was taken on December 25; Guadalajara on January 5, and Zacatecas on February 6, 1864; Juarez took refuge in Monterey, from which he chased the Governor of New Leon, Vidaurri, who wished to be independent. Juarez solicited the aid of the United States, offering to cede Sonora, but that country being absorbed by the War of Secession it would not accept. Comonfort had been killed. Ortega, who had escaped, was embroiled with the President and seemed disposed to ally himself with Bazaine. The new Emperor had a clear field. He had declared on October 3 to a Mexican deputation that came to Miramar to offer him the crown that he would accept it under the reserve of the unanimous adhesion of the nation; the address was signed by two thousand communes; on April 10, 1864, the Archduke announced his adhesion, was consecrated by the Pope at Rome, and sailed for Vera Cruz on May 29.

Maximilian arrived in Mexico with his wife, Marie Charlotte (daughter of the King of Belgium), on June 12, 1864. He attempted a conciliatory policy, scattering

the extreme clerical orders. He refused to restore the *fucros* of the clergy and abolish the *peónat*, which was a kind of bondage imposed upon the Indians. By this means he alienated the reactionaries without rallying the patriots around him. At the same time he promulgated martial law against the republicans who still held the country. The French army had occupied Monterey and driven Juarez back to Chihuahua; Bazaine marched against Porfirio Diaz, and took Oajaca on February 9, 1865, and then occupied Chihuahua (August 15). Juarez installed himself at El Paso del Norte, the last point of Mexican territory that had remained free.

*Maximilian  
arrives in  
Mexico.*

It was thought that he had gone into the United States, and on October 3 Maximilian issued a decree declaring that this departure had put an end to the resistance and that henceforth the Liberal guerrillas would be regarded as associations of malefactors and their members should be shot in twenty-four hours; any one providing them with arms, provisions or information must submit to capital punishment. These severe measures were not calculated to strengthen a rule that was supported only by foreign bayonets.

*Maximilian  
issues a  
severe  
decree.*

The downfall of the new Empire of Mexico was rapid. It was never recognized by the United States, which had never ceased treating Juarez as the head of legal power. On April 4, 1864, Congress, at Washington, had declared that the people of the United States considered it incompatible with its principles to recognize a monarchy

*Rapid  
downfall  
of the  
Empire.*

*Juarez  
refuses to  
yield his  
powers.*

*Mexico  
shakes off  
the yoke.*

instituted under the auspices of a European Power. Neither the Senate nor the President were connected with it; but as the War of Secession drew near its close, on February 9, 1865, the Federal Government, in the name of the Monroe Doctrine, demanded Napoleon III. to recall his troops, so as to leave the Mexicans free to choose their own government. Vainly they tried to protract matters; the language of the United States became menacing, and evacuation became inevitable. A loan of 170 millions, subscribed in France, brought but 50 millions to the Government. Bazaine and Maximilian were not in harmony and were powerless; the Pope had rejected a new concordat that sanctioned the sale of the possessions of the clergy. Disaffection multiplied. Immoveable, Juarez, whose powers expired on November 30, 1865, had prorogued them, refusing to yield place to the president of the Supreme Court, Ortega, who should have filled the interim. Volunteers streamed in from the United States; the execution of the republican leaders, Artcagá and Salazar, shot by General Mendez (October 31, 1865), only served to excite the patriots. Even old Santa Anna issued from his retreat in Havana. As soon as the order for the return of the French troops was known, the Mexicans shook off the yoke. In January, 1866, the Liberals were masters of the State of Durango; in February, of New Leon; on June 14, Mejia capitulated at Matamoros; Monterey was evacuated; Tampico was taken in August, and Juarez was rein-



stalled at Chihuahua in September. Vainly did the Empress Charlotte supplicate Napoleon; they even refused to send fresh Austrian volunteers. The chivalrous Maximilian refused to abdicate, unwilling to abandon his followers to the reprisals of the conquerors. On March 11, 1867, the last of the French soldiers departed; *The French depart.* the Belgians and most of the Austrians had also left. Events followed rapidly; the bands of Apaches and Opatas that had guarded the Imperial tent were pushed to the north; the Imperialists were vanquished as far south as Yucatan; Porfirio Diaz, after having defeated Marquez, arrived before the gates of Mexico; Maximilian retired into the fortress of Queretaro, while Marquez shot his prisoners and terrorized the capital. Escobedo besieged Queretaro, where Miguel Lopez surrendered the citadel (May 15, 1867); Mendez was shot on the same day; in the following month, Maximilian shared the same fate with Mejia and Miramon (June 19). *Maximilian executed.* The Liberals would not allow the departure for Europe of a pretender whose court had been the permanent arena for conspiracies; and they meant to give a bloody warning to all European princes in quest of a crown. On June 21, General Diaz entered Mexico; on June 25, Vera Cruz surrendered. Juarez re-entered his capital amid acclamations and was re-elected President.

[In 1863, the Ionian Islands are united to Greece; a Polish insurrection against conscription is brutally sup-

*Lincoln  
abolishes  
slavery.*

pressed by Muravieff. Lincoln issues a proclamation abolishing slavery. Grant captures Vicksburg and controls the whole Mississippi. Lee defeats the Federals at Chancellorsville and invades the North, but is defeated at Gettysburg. Gordon suppresses the Taiping Rebellion. Japan is attacked by French, English, and American fleets.]

# THE EMANCIPATION OF THE SLAVES

(A.D. 1863)

JAMES SCHOULER

POSTERITY, which finds the pathway cleared, must do justice to the humane generation of Americans that hesitated, while considering its honest legal duty. Most admirably did the President himself express the dominant loyal sentiment of his times, which forbade that emancipation should supplant the original cause for taking up arms instead of applying in furtherance of it. "My paramount object in this struggle," as he declared in an oft-quoted letter to Horace Greeley, "is to save the Union, and is not either to save or to destroy slavery. If I could save the Union without freeing any slave, I would do it; and if I could save it by freeing all the slaves, I would do it; and if I could save it by freeing some and leaving others alone, I would also do that."<sup>1</sup>

*Dominant  
sentiment  
of the day.*

<sup>1</sup> This was written only a month before he issued the preliminary proclamation of emancipation.

*Speech  
of John  
Quincy  
Adams.*

*Slavery and  
the war.*

*Slaves  
contraband  
of war.*

But a year of desperate and indecisive conflict had shown to the North God's guidance toward new social conditions. Scarcely were Northern troops seen hastening to the defence of the capital, when John Quincy Adams's speech was recalled and reprinted in Northern presses, with that ominous threat that slaves might be lawfully freed by a constitutional exercise of the war power in case of disloyal rebellion. It was impossible that the rebellious States should be invaded at all without making slavery omnipresent in its military aspects. And one point soon became clear, that troops from the free and loyal States were not to be used at the seat of war as slave-catchers or the police of social oppression. Butler, who, though of Democratic and Doughface antecedents, was a quick-witted politician, read those signs speedily. On reaching Maryland at the first call to arms, he offered the use of his regiments as a Massachusetts brigadier to put down any slave uprising which might occur there, and joined issue through the press with his governor on that subject; but a month later, when in Federal command at Fortress Monroe, he was of all generals zealous to formulate a policy which should compel slavery to endure its own disadvantage. Of slave insurrection there was never a serious danger; but these docile children of nature would come flocking into the Union lines like estrays, because the master's hold was loosened. Butler framed the ingenious plea that such fugitives were contraband of war, since the enemy used the able-bodied



THE FRENCH ATTACK ON THE FORT AT PUEBLA, MEXICO (Page 48)

FROM THE PAINING BY BIACÉ



slave to build batteries and dig intrenchments. That expression was a happy one, and became immensely popular. "I'se contraband," the grinning runaway was supposed to say to the master who sought to reclaim him; and the idea of self-confiscation tickled so greatly the Northern sense of humor that the chattel was left unsundered. For negro freedom was popular enough with the North if only the Constitution were obeyed.

Strict confiscation had in law but a limited range; and in the practical denial of a surrender for such waifs of bondage our department generals found occasion to differ. Thus, in 1861, while Butler in southeastern Virginia virtually freed the slaves who came to him, Sherman and Buell in Kentucky, Dix in Maryland, and Halleck in Missouri, slave regions less positively disloyal, took a more conservative attitude and ordered slaves kept out of their lines. This latter course avoided, were it possible, all implied obligation of surrendering to loyal masters; for, as Dix wrote, "we have nothing to do with slaves." In some rare instances orders issued that fugitives should be restored; but the undercurrent of military practice strengthened in the direction of permitting freedom. The love of curiosity, of novelty, of vagrancy, and his own irrepressible longing for liberty, brought the slave into the Union camps, ragged and shiftless; and humanity enjoined that he should be fed and sheltered. Officers kept such negroes as servants or set them to

*Conservative attitude of some Northern generals.*

work as cooks, teamsters, and laborers; and when campaigns of invasion began, whole families of slaves were found upon plantations, deserted by their owners and helpless. In the mildest sense of lost and abandoned property, government might well have claimed reimbursement for its care and support of such creatures.

*A new  
awakening.*

*Treaty  
with Great  
Britain.*

Plainly, then, as things tended after the real struggle of civil war began, this Union could never have been restored to its previous condition, as concerned slavery, with that institution strong as before. The awakening of the Northern mind was shown in the second session, in which were debated long and earnestly the new and shifting aspects of this always perplexing problem. Had McClellan's spring campaign in Virginia ended in the speedy capture and downfall of Richmond, a practical, though somewhat negative, emancipation must in the nature of things have largely resulted from his military operations. Public opinion moved onward. A treaty with Great Britain for a joint suppression of the slave-trade, with a mutual right to search suspected merchant vessels, was concluded at Washington in April of the new year. And of other practical measures tending in the same direction, passports were to be granted without distinction of color; Hayti and Liberia gained recognition for diplomatic intercourse; freedom was declared henceforth within all territories of the United States; slavery was eradicated in the District of Columbia by a measure such as Lincoln had proposed years earlier, while in Con-



gress; and the curse was removed from the soil of the nation's capital.

Conscious that this philanthropic drift must continue, the President now procured the sanction of Congress to a general plan of compensated abolition for winning the loyal border States to freedom. A joint resolution of April 10th, which passed Congress at his suggestion, offered the co-operation of government to any State that might emancipate, whether gradually or at once, by giving pecuniary indemnity for the inconvenience, public and private, of changing the system. Recompense, in other words, was offered to the loyal border States, on the principle just applied as of constitutional right in the District of Columbia. Lincoln's message of March 6th, solemnly commending such co-operation, was meant to avert more violent results, and to tender seasonably to slaveholders the olive branch.

*Lincoln's  
message of  
March 6,  
1862.*

Lincoln was a man of expedients; and, impressed though he was by the moral aspects of the struggle forced upon him, he took anxious care not to foster dissensions among loyal States, nor suffer a strife for the integrity of the Union to lapse into a remorseless revolution. The immediate and practical aspects of administration he kept constantly in view. Yet slavery, with its ambitious rivalry and dissensions, had caused this bloody struggle; and a deep, though undefined, hope increased among the Northern people that somehow, in God's providence, slavery and rebellion would perish together.

Full abolition could only be secured by a constitutional amendment, and such amendment by the constitutional method was, in the present stage of sentiment, impossible. But emancipation by edict in aid of the war power against the rebellious and disloyal was held legitimate.

*Tendencies  
to freedom.*

In that respect Lincoln reserved strictly to himself the weighty initiation. His views varied, together with his policy, not because his purpose was fixed far in advance, but because his conscience advanced with that of the conservative people, whose gradual change of sentiment was like that which had brought their ancestors, in 1776, to throw off allegiance to the King, when resistance to bad measures was the cause of taking up arms. Fremont, at Missouri, had announced military emancipation too early, and the President overruled him. Hunter, a warm personal friend, issued, while commanding in South Carolina, a similar edict, which the President modified in 1862, publicly declaring that, as commander-in-chief, he reserved so momentous a decision to himself. While proclaiming this, he earnestly pressed his plan of compensated abolition upon the loyal slave States. On the 12th of July, at a conference held by his invitation at the White House, he once more, in a most impressive address, urged the border Representatives, now about to return home for the recess, to lay that plan before their several constituencies.

*Plan of  
compensated  
abolition.*

There were signs this spring that a policy of emancipation would strengthen the Union cause in England.

Weed wrote from abroad that Lord Palmerston's hostility to slavery was earnest and unchangeable. What with debates of the long session upon various phases of the slavery question, and the differing and often conflicting orders of the various commanders, some thought the government too fast, others too slow, in the new direction. In truth, the disposition grew in Congress to compel the President to proclaim emancipation. Slaves of disloyal persons in the Confederate States were declared emancipated upon coming within the Federal lines; all persons in the army and navy were prohibited from passing judgment upon the claims of slave masters. Much, in short, was done before adjournment toward authorizing the Union armies to grind negro vassalage under foot as they went forward. Yet Northern opinion constrained Congress from compelling the President upon the issue of proclaiming freedom to the slave.

*Palmerston's hostility to slavery.*

*Northern opinion.*

A gloom had come over military operations after the bright harbinger of spring. Upon McClellan's repulse on the peninsula, had been arranged, with State governors, the new levy of three hundred thousand men. Lincoln, now left unfettered by Congress, brooded over the great question of declaring general emancipation through the whole insurrectionary region. Five days after the adjournment of the legislative branch he reached his conclusion, impelled by conscience and a military necessity. On Monday was held a Cabinet meeting for considering various stringent military measures, such as subsisting

*Lincoln  
and his  
divided  
Cabinet.*

troops in the hostile territory, and employing negroes in the army and navy—projects presently embodied in general orders. On the next eventful day, July 22d, the subject was resumed; after which Lincoln read to his Cabinet the draught of a proclamation, declaring free the slaves of all States still in rebellion on the first of January ensuing; but commending once more to the loyal slave States his plan of compensated abolition. Brief memoranda of the occasion are extant; but all the President's advisers, except Seward and Welles, were taken by surprise, and bewilderment was shown at the magnitude of the project. This draught, which the President had prepared upon his own conviction and without the knowledge of his Cabinet, gave rise to various comments; the same hesitation and variance of views being visible here as among the people at large. Blair, who alone positively objected, declared it would cost the approaching elections. "Nothing, however, was offered," as Lincoln related afterward, "that I had not already fully anticipated and settled in my own mind, until Secretary Seward spoke. He said in substance, 'Mr. President, I approve of the proclamation, but I question the expediency of its issue at this juncture; the depression of the public mind, following upon recent reverses, might make it viewed as the last measure, a cry for help,—the government stretching forth its hands to Ethiopia, instead of Ethiopia stretching forth her hands to the government.' Hence, he advised deferring its issue until sup-

*Seward's  
views.*

ported by some military success." The wisdom of that view struck the President with very great force; it was an aspect that with all his thought he had entirely overlooked, and so he put the document away, waiting for victory. Pope was defeated, we have seen, the last of August; but Antietam's victory furnished the occasion in September. After two months' intermission the President resumed the subject with his Cabinet; stating reverently that he had made the promise to himself and his Maker to issue that proclamation as soon as the rebel army was driven out of Maryland, and test God's favor to the act he proposed. The responsibility was now his own, and the Cabinet officers, though not voting, promised each in turn his support. With general approval, a change or two was made in the original draught at Seward's suggestion; chiefly a promise to "maintain" the freedom which it recognized. The Cabinet meeting over, the great seal was affixed to this document at the State Department. The President signed it the same afternoon, and the Northern press the next morning sent it broadcast through the land. Such were the circumstances that ushered in, with characteristic caution, and upon due notice, the social regeneration of America; and the 1st of January, 1863, the promise "to recognize and maintain" took effect. Posterity will agree that Lincoln chose the right time for this becoming act of mercy, and showed consummate statesmanship in his decision and the means for giving it effect.

*Lincoln  
assumes  
the respon-  
sibility.*



# THE BATTLE OF GETTYSBURG

(A.D. 1863)

JAMES SCHOULER

IGNORANT, as scarcely ever before, of his adversary's movements, and seriously hindered by the absence of his cavalry, Lee did not learn until the evening of the 28th that the Army of the Potomac had crossed into Maryland. Little more than this could he learn at all. He, as well as Meade, had prudently meant to avoid an open battle except under favorable conditions; yet, in spite of the precautions on either side, these two formidable armies rapidly approached one another like two thunderclouds from different points of the compass, all through the last day of the month of June; Longstreet and Hill marching east that day, through the mountains of Gettysburg, while Meade unconsciously headed toward them almost in a perpendicular direction. The most tremendous and the most significant open battle of the whole Civil War was historically the result of a collision of these two armies, simply accidental, while on the march. Neither Lee nor Meade made deliberate choice of the eventual fighting position.

*Approach  
of hostile  
armies.*

*Position of  
Gettysburg.*

Gettysburg—to the Southern cause “a glorious field of grief”—lies in a peaceful pastoral region, walled in on the west by the blue line of the South Mountain range, and studded throughout its landscape by lesser hills. Nearly of the same longitude as Washington, it is situated in Pennsylvania not far north of the Maryland border. Here the Chambersburg and Hagerstown roads cross one another and diverge; while a valley, highly cultivated, with grain fields and orchards, lies slumbering with thrifty farmhouses between two nearly parallel ranges of hills—Seminary Ridge on the west (near which stands a Lutheran seminary), and, on the southeast, Cemetery Ridge, one of whose hills is consecrated for burial purposes. This latter range begins in a bold and rocky cliff, called Culp’s Hill, at whose southerly extremity towers a conical and commanding rock, Round Top, crowned with a smaller spur, called Little Round Top, which overlooks the surrounding country. Midway in the peaceful valley is a lower intermediate ridge, along which runs the road to Emmitsburg. Upon this natural theatre was fought the desperate three days’ battle to be described, in the hot and exhausting weather of midsummer.

*Meade’s  
prepara-  
tions.*

Learning from Couch that Lee’s army had turned away from the Susquehanna River, Meade, before dawn of July 1st, arranged for a defensive line of battle along Pike Creek, there to await the enemy’s approach. But Reynolds had gone leisurely on in advance, to occupy



the obscure town of Gettysburg, having in command the 1st, 3d, and 11th corps, the left grand division of Meade's army. Buford, who had taken possession of this town with his cavalry the day before, and thrown out pickets, encountered on the Chambersburg road a fragment of the enemy's advancing host. He despatched the tidings at once to Reynolds, who dashed forward on horseback, on that memorable morning, with his 1st corps following fast on foot, and sent word for the rest of his command, now miles in the rear, to hasten up quickly. After an anxious survey with Buford from the belfry of the Lutheran seminary, Reynolds resolved upon the morning's work. Here a battle might well be risked; here the instant duty was to keep back that oncoming wave until Meade could mass his host to break it. With a higher mandate plain before his eyes, the letter of his written directions seems to have been disregarded. Heth's Confederate division approached in force from the west; and while Reynolds held it watchfully in check on the Chambersburg road, that devoted officer was shot dead by a bullet through his brain. His glory on this field was first and greatest, yet others were to win glory there before the fight ended. Doubleday now took charge, with such of the 1st corps as had arrived, and the fighting began in earnest. From ten in the forenoon for three long hours the 1st corps alone, with Buford's cavalry, bore the brunt of the enemy's advance, and forced A. P. Hill to wait for Ewell. The Confed-

*Reynolds' quick decision.*

*Reynolds holds Heth in check.*

*Howard  
arrives.*

*Ewell's  
success.*

*Hancock  
assumes  
command.*

erates, largely reinforced, were pressing hotly when, about two o'clock, Howard arrived with his 11th corps, and, by virtue of his rank, assumed direction. He deployed at once to hold the two western roads to the left, while on the right confronting Ewell's phalanx, which came into view on the road from Carlisle. But the Union line had extended too far; and Ewell, assailing it simultaneously in front and on the exposed flanks, won an easy victory; for in both numbers and position the Confederates had now the advantage. Howard's column was pressed back into the town and through it, closely pursued, and suffering much in wounded and captured. But before this misfortune, Howard had taken the precaution to secure Cemetery Hill, which made a strong refuge place for posting anew his retreating troops as they poured southward. At this juncture, and toward four in the afternoon, Hancock arrived on the scene, sent thither by Meade to assume command in consequence of the death of Reynolds, whose tidings reached him. Hancock's splendid presence at this discouraging moment was like that of another army corps, and gave calmness and confidence to our exhausted soldiery. He checked the fighting and received the disorganized regiments as they arrived. Howard, though demurring at the authority given by Meade to one who was, in lineal rank, his junior, co-operated generously in restoring order. The two arranged together a new position on Cemetery Hill and along the Ridge, impregnable to

further assault for the day, and covering Gettysburg and the roads from Baltimore and the South. Slocum now reached the scene with Sickles's dusty veterans of the 3d corps, who had been marching all day by the Emmitsburg road. To him, as ranking officer, the command was turned over, and Hancock galloped back to urge upon Meade the advantage of this new field of battle.

*Slocum  
relieves  
Hancock.*

Meade, while taken unawares, had not hesitated what course to pursue; and, though but three days in command of this great army, he relinquished one plan to take up another, and moved his whole force promptly to the rescue. All night, and by every road of approach, the Union troops came swarming in from the southward, and marched to their positions under the light of the full moon. Meade himself came upon the field at one o'clock the next morning, pale, hollow-eyed, worn with toil and loss of sleep, yet rising to the measure of his responsibilities.

*Meade  
arrives on  
the field.*

Lee, at the opposite entrance to Gettysburg, had arrived on the 1st, in season to watch from Seminary Ridge the new position which his flying foe was taking. His mind was not yet made up to fight an offensive battle; for, impressed by the steadiness of this new alignment, he gave no order of attack to break up the Union preparations, but merely sent Ewell the suggestion to carry Cemetery Hill if he thought it practicable. Ewell, however, spent the afternoon in waiting to be reinforced; and a great Confederate opportunity was neg-

*Lee's  
hesitation.*

*Temptation  
proves  
fatal.*

lected. Lee's suspense need not be wondered at; for Longstreet, his second and his ablest adviser, urged him at this point to keep to his original plan, and, avoiding a pitched battle, march aside by the flank down to Frederick. "No," was Lee's response, "the enemy is there, and there I mean to attack him;" and, with signs of a great success in his grasp, the temptation to stay and fight the battle out proved irresistible. But as accident had lured him on to action, so action deferred lured him to a second day of loss, and that loss to a third day of irreparable slaughter. Possibly the danger of moving still further to the southeast influenced his fatal decision.<sup>1</sup>

The sanguinary fight of the 2d did not commence until far into the afternoon. This July weather was hot and oppressive; many of the troops just arrived on either side had borne a long and exhausting march; and doubtless the opposing commanders felt the onerous burden of initiating battle. Both Meade and Lee had planned an attack for an early hour of the morning; but the one abandoned that intention, waiting for another corps to arrive; while the other, partly for a corresponding reason, but more because Longstreet did not share his sanguine hopes, deferred giving immediate orders.<sup>2</sup> By afternoon Meade had posted three corps over Cemetery

<sup>1</sup> "In view of the valuable results," says Lee's dry report on this point, "that would ensue from the defeat of the army of General Meade, it was thought advisable to renew the attack."

<sup>2</sup> The delay was for Longstreet, who did not get McLaw's division until noon, nor had Pickett's yet arrived.

A.D. 1863

## THE BATTLE OF GETTYSBURG

Ridge, under Slocum, Howard, and Hancock, the last named holding the crest with the 2d corps, while Sickles, with the 3d corps, gave support on the left, and the 5th corps formed the reserve on the right. Sedgwick and the 6th corps, whom Meade had also waited for, came in sight when the battle had begun, after a long night's march. About a mile distant, Lee's army swept in a wide curve from hills on the northwest of Gettysburg to the high ground in front of the Round Tops; Ewell holding the Confederate left, Hill the centre, while Longstreet's troops, which were the last to arrive, were posted on the extreme right.

*The second day's fighting.*

Little Round Top was the key to the Union position; and the enemy, concealing their movements in thick woods until the signal for assault was given, revealed themselves suddenly at four o'clock, with an outflanking line. Sickles held an advance position not intended by Meade, but too late to be rectified. Upon him, unsheltered, was made by Hood's division from Longstreet the first furious assault, Lee desiring that ground for his artillery in storming the higher crests beyond.<sup>3</sup> Here, for nearly two hours, raged a fierce and sanguinary conflict. Sickles, with one leg shot away, was borne from the field, and Birney fought desperately in his place; Humphreys was compelled by McLaws to retreat under

*Second day at Gettysburg.*

<sup>3</sup> Sickles's true position had been intended for the extreme left near Hancock. He now stood near what was called the Peach Orchard, toward the Emmitsburg road.

a withering fire. But reinforcements, which Meade sent in good season, protected the withdrawal of that corps to a safer ground. Meantime came a close and bloody hand-to-hand fight for possession of Little Round Top, toward which Hood's troops had been stealthily climbing. Warren, chief of engineers, who was posted in this vicinity, pressed instantly to the scene of danger; and, after a fierce encounter, reinforced on either side, the enemy were driven down the precipitous slope and the crest was held securely. But this was done at a terrible sacrifice; and among young Union officers of promise who here gave their lives were Weed, Hazlitt, O'Rourke, and brave Strong Vincent, the first of all Union officers to reach the summit. As twilight gathered, Humphreys's division advanced and recaptured the guns they had lost, and by nightfall the whole Union line from Round Top to Cemetery Ridge was held impregnable.

Lee had wished Ewell to assail the extreme Union right at Cemetery Hill while this contest went on, with Hill at the same time watching his chance to fall upon the centre. Ewell, in attempting to carry out his part of the plan, attacked the 11th corps with such energy that Howard was compelled to ask assistance, which Hancock rendered by despatching Carroll's brigade. The Confederates were driven from the hill; but later in the day, when the Union right was much depleted by the reinforcements hurried to Round Top, a line of intrenchments left here by Geary's division were carried by the

*Ewell's  
success.*

Confederate General Johnson, who held the position all night. Artillery had taken part wherever it could, in a pell-mell fight which slackened and then ceased late in the evening.

The full-orbed moon was shining when Meade summoned a council of his chief officers, after the action was over, to decide whether to stay or withdraw. There was but one voice in the conference; for all present were in favor of fighting out the battle where they stood, awaiting an attack; and Meade adopted that opinion as his own. On the Confederate side was reached the same conclusion; for, whatever his earlier misgivings, Lee felt himself too strongly committed by the day's partial triumphs to retreat ignominiously. At a bloody cost he had gained the Emmitsburg road and ridges for his artillery, on one side, and planted himself within Federal intrenchments on the other.<sup>4</sup> Though not all the success he had hoped for, this was yet something; and, besides adding Pickett's strong division, newly arrived, to strengthen Longstreet, his centre was fresh and had scarcely as yet engaged at all. His army appeared in fine spirits, and the South Mountain defiles were close at hand, should retreat be necessary. The risks of manœuvring toward Baltimore and Washington, as Longstreet had advised, were greater now than on the day before; and so, putting aside with good humor the warning

*The council of war.*

*Lee's derision.*

<sup>4</sup> Lee thought he had gained a success because he had taken ground from his foe and captured several field-pieces. Ib. 341 (Longstreet).

advice of his chief subordinate, he accepted the final gage of battle which Meade offered him.<sup>5</sup>

Thursday, the 3d of July, dawned with that same bright summer weather, intensely hot, which invited inaction until the sun should pass its meridian. Meade, though uncertain of the issue, prepared for either fate with coolness and forethought. At sunrise he telegraphed to his general who commanded at Frederick, to harass and annoy the enemy should they be driven to retreat, but in case discomfiture came to the Union army, then to interpose his force so as to protect Washington.<sup>6</sup> Upon Meade rested the earliest renewal of the fight, for it was needful to dislodge Johnson's intruders from the intrenchments they had gained at the right near Culp's Hill, and toward the Baltimore turnpike.<sup>7</sup> This was accomplished, after a desultory fight of several hours, beginning at early dawn; and then Geary's troops marched once more into their intrenchments to reoccupy them, and Lee's concert of plans was lost.<sup>8</sup>

*Third day  
at Gettys-  
burg.*

No general battle had been drawn on by this morning's operation, and noon approached with intense stillness in the adversary camp. But Lee had employed his entire forenoon in preparing for a last assault upon the

<sup>5</sup> Longstreet expressed his hopelessness of the attempt, but Lee gave him orders.

<sup>6</sup> And to be prepared for either contingency.

<sup>7</sup> Had Lee thus penetrated and got across the Baltimore pike, there would have been danger.

<sup>8</sup> Where Johnson was driven out a forest of dead trees marked the place later, killed like soldiers by the bullets.



Union lines; this time making Cemetery Hill the crest to be carried, and masking his preparations as far as possible under cover of the woods and the crest of Seminary Ridge. To the faithful though unwilling Longstreet was committed a task not unlike that which Burnside had essayed at Fredericksburg; and Lee's proud disdain of Northern soldiery, as compared with his own, reached now its retribution. For this final onslaught the post of honor was given to Pickett's division of the Virginia chivalry, supported by Wilcox, Pettigrew, and Trimble, whose three fine divisions belonged to A. P. Hill's command. The midday silence was broken by a simultaneous discharge of 130 cannon planted on the Confederate ridge, to whose terrific uproar half the number responded on the Union side. Dense clouds of smoke settled over the valley, through which the shells went hissing and screaming to and fro. This tentative artillery duel, whose damage done was trifling in comparison with the prodigious noise and flame, occupied about an hour. The Union lines stood firm as before, and even firmer, and no spot showed weakness for the foe to break. Obedient to Longstreet's orders,<sup>9</sup> as the black canopy rolled away, Pickett valiantly led forth his troops from behind a ridge, where they had lain concealed, and a column of some 17,000 men moved wedge-like over the green landscape of waving grain and stubble, irradi-

*Preparations for a last assault.*

*The artillery duel.*

<sup>9</sup> Given with a heavy heart.

*Pickett's  
charge.*

*Repulse  
and retreat.*

ated by the beaming sun. On they came, in full sight from Cemetery Ridge, for nearly a mile; but before they had advanced halfway across the valley they bore off toward the centre and in the direction of Hancock's front. And now, while the Union artillery, which Lee had hoped to silence, opened from right to left upon the forlorn column with a terribly destructive fire, Pickett's assaulting force of five thousand, thinning in ranks at every step, approached the long bristling Union line, which was drawn up firm on the heights. Pettigrew's division, supporting it on the left, was attacked by Alexander Hays, of Hancock's corps, with such fury that the ranks wavered and broke, and all courageous who were left alive mingled with the troops of Pickett. At an advanced point, where part of Webb's small force held a stone fence, that barrier was carried with yells of triumph; but Webb fell back among his guns, and, aided from right and left by Union brigades and regiments, which rushed valorously to the scene, a din and confusion arose, men fighting and overturning one another like wild beasts, until, at a little clump of woods, where Cushing, a Union lieutenant of artillery, fired a shot as he dropped, and the Confederate General Armistead, foremost in this assault, fell while waving his hat upon his sword-point, the last invading surge expended itself. More than two thousand men had been killed or wounded in thirty minutes. Pickett now gave the order

to retreat, and as his bleeding and shattered force receded in confusion, the Union soldiery sprang forward, enveloping on all sides the Confederate ranks, and swept in prisoners and battle ensigns. Wilcox, too, whose supporting column on the other side had become isolated, had to cut his way out in retreat, forced by a Union brigade, while batteries from above on Little Round Top rained down iron hail. While this main battle raged, sharp cavalry combats took place upon both flanks of the hostile armies.

With the repulse of Pickett's splendid but impracticable charge, the third day's fight of Gettysburg, the briefest of all in duration, and yet in proportion the bloodiest, came to an end. Lee, shaken by the fearful consequences, took candidly the blame of this futile effort upon himself, and with soothing words drew off to save the remnant of his army. Meade, from the opposite heights, made no countercharge, but comprehending quite slowly the magnitude of his victory, which he described in despatches as a "handsome repulse," refrained from pressing forcibly his advantage. For this there was prudent reason to one so new in command. The anxious strain of those hot summer days had been most severe; and Meade's own losses were so enormous that adequate thought could hardly be given to the corresponding harm inflicted upon the enemy. Of Union generals most tried and trusted, Reynolds lay dead, while Sickles, Han-

*Lee withdraws his shattered army.*

*Union losses.*

cock, Gibbon, Doubleday, Warren, and Webb were all wounded, unable to take part in a pursuit.<sup>10</sup>

The 4th of July was passed in last offices to the ghastly heaps of dead; but Lee's request for a truce and exchange of prisoners Meade properly declined under the circumstances. A violet rainstorm was further excuse for Meade's inaction, and, when night came, a military council advised him to remain where he was, keeping a close watch upon his adversary. On the morning of the 5th the Confederates were found to be in full retreat through the mountain passes, and Meade pursued southward to intercept their passage of the Potomac. Now came the most earnest injunctions from Washington to give the foe neither rest nor respite; and Lee's position was truly critical when, on reaching the Potomac, he found his pontoons partly destroyed and that river so swollen by rains as not to be fordable. While Lee intrenched, waiting for the river to fall, Meade, scarce a mile distant, prepared from the 10th to the 12th to fight him; but in another council of war, most unfortunately called, from which his best advisers were necessarily absent, Meade found his own opinion overborne and unhappily yielded. With nothing more than a reconnaissance meanwhile for annoyance, Lee crossed with his whole force after the Potomac had fallen so as to be fordable, and on the

*Meade's  
fruitless  
pursuit.*

<sup>10</sup> A large preponderance of military testimony, however, Union and Confederate, goes to show that Meade should have pushed his advantage at Gettysburg after Pickett's bloody repulse with more energy than he displayed.

morning of the 14th he was safe once more upon the Virginia side. *Escape of Lee's army.*

Meade's noble success at Gettysburg—where for the first time reserves in this army were put forward in battle at the right time and place—won him a promotion to brigadier-general in the regular army, and a public gratitude imperishable. But so keen was the administration's disappointment that the full harvest of victory had not been reaped, that a despatch from Halleck, harshly commenting on Lee's escape, provoked Meade to tender his recall. Such return for his inestimable service was not to be thought of, and Meade remained in command. But a phrase in his general order of the 4th, which announced the enemy "utterly baffled and defeated," had been to Lincoln a foreboding reminder of Antietam, for it spoke of "driving the invader from our soil" as the supreme effort requisite. "Will our generals," he inquired, "never get that idea out of their heads? The whole country is our soil." And he regretted that he had not himself gone to the front and issued personally an order to attack Lee vigorously on the retreat, regardless of all military councils. But time and reflection restored his confidence in Meade as brave and highly deserving, if not faultless. For at Gettysburg, like Flodden's fatal field, the right arm of the South was broken, as all now concede; and that battle, one of the most destructive of modern times, portended the fate of this insurrection. In that first and only shock of arms upon free Northern

*Meade's reward.*

*Lincoln's annoyance and regret.*

soil, two leading generals on the Union side besides Meade himself fought for his native State,<sup>11</sup> and mighty feats of valor performed on either side marked the prolonged encounter.<sup>12</sup>

*Sherman in  
Georgia.*

[In 1864, a short war against Denmark by Austria and Prussia ends in the spoliation of the former. Sherman marches through Georgia and captures Savannah, and Thomas is successful at Nashville. Grant fights the terrible battles of the Wilderness against Lee, the fighting lasting a month. Lincoln is re-elected President. In 1865, Transylvania is united to Hungary. Richmond is captured and Lee capitulates at Appomattox. Lincoln is murdered. Chili and Peru, allied, make war against Spain. General Booth starts the Salvation Army in East London. Lister introduces antiseptic surgery in Glasgow.]

*Lincoln  
murdered.*

<sup>11</sup> Meade, Reynolds, and Hancock were all born in Pennsylvania

<sup>12</sup> At least 70,000, from first to last, fought under Lee at Gettysburg, and 90,000, or somewhat more, under Meade. The number varied from day to day. On the Union side were lost in killed, wounded, and missing, 23,003; on the Confederate side, 20,451—a nearly equal loss in proportion. But, with a diminishing military population, the South suffered by far the greater exhaustion. This “may be regarded as the most eventful struggle of the war,” says Jefferson Davis.

# ANÆSTHETICS AND ANTI-SEPTICS

ALFRED RUSSEL WALLACE

A BRIEF notice must also be given of two discoveries in practical physiology, which have perhaps done more to benefit mankind than those great mechanical inventions and philosophical theories which receive more general admiration. These are, the use of anæsthetics in surgical operations, and the antiseptic treatment of wounds. *First use of anæsthetics.*

Anæsthetics were first used in dentistry in 1846, the agent being ether; while chloroform, for more severe surgical operations, was adopted in 1848; and though their primary effect is only to abolish pain, they get rid of so much nervous irritation as greatly to aid in the subsequent recovery. The use of anæsthetics thus renders it possible for many operations to be safely performed which, without it, would endanger life by mere shock to the system; while to the operating surgeon it gives confidence, and enables him to work more deliberately and carefully from the knowledge that the longer time occupied will not increase the suffering of the patient. *Introduction of antiseptic treatment.*

## THE WORLD'S GREAT EVENTS

or render his recovery less probable. Nitrous-oxide gas is now chiefly used in dentistry or very short operations, sulphuric ether for those of moderate length, while chloroform is usually employed in all the more severe cases, since the patient can by its use be kept in a state of insensibility for an hour or even longer. There is, however, some danger in its use to persons with weak heart or of great nervous sensibility, and the patient in such cases may die from the effects of the anæsthetic alone.

*Death-rate  
reduced.*

Even more important was the introduction of the antiseptic treatment in 1865, which, by preventing the supuration of incised or wounded surfaces, has reduced the death-rate for serious amputations from forty-five per cent to twelve per cent, and has besides rendered possible numbers of operations which would have been certainly fatal under the old system. I remember my astonishment when, soon after the introduction of the practice, I was told by an eminent physiologist of the new method of performing operations, in which the freshly cut surfaces could be left exposed to the air without dressings of any kind, and would soon heal. The antiseptic treatment was the logical outcome of the proof that suppuration of wounds and all processes of fermentation and putrefaction were not due to normal changes either in living or dead tissues, but were produced by the growth and the rapid multiplication of minute organisms, especially of those low fungoid groups termed Bacteria. If, therefore, we can adopt measures



## ANÆSTHETICS AND ANTISEPTICS

to keep away or destroy these organisms and their germs, *Antiseptics*  
or in any way prevent their increase, injured living tissues will rapidly heal, while dead animal matter can be preserved unchanged almost indefinitely. In the case of wounds and surgical operations this is effected by means of a weak solution of corrosive-sublimate, in which all instruments and everything that comes in contact with the wound are washed, and by filling the air around the part operated on with a copious spray of carbolic acid. Cold has a similar effect in preserving meat; while the *Preserving meat.*  
process of tinning various kinds of food depends for its success on the same principle, of first killing all bacteria or other germs by heating the filled tins above the boiling point, and then keeping out fresh germs by air-tight fastening.

The combined use of anæsthetics and antiseptics has almost robbed the surgeon's knife of its terrors, and has enabled the most deeply seated organs to be laid open and operated upon with success. As a result, more lives are probably now saved by surgery than by any other branch of medicine, since in the treatment of disease there has been comparatively small progress except by trusting more to the healing powers of nature, aided by rest, warmth, pure air, wholesome food, and as few drugs as possible.

[In 1866, the Seven Weeks' War breaks out between Austria and Prussia. Queen Isabella of Spain appoints a

## THE WORLD'S GREAT EVENTS

new Ministry under Narvaez, and the Cortes is dissolved. The Turks suppress a revolt in Crete, which has proclaimed its union with Greece. The Fenians invade Canada. The Dred Scott decision is cancelled by an addition to the Fourteenth Amendment. The Atlantic cable is laid under the direction of William Thomson.]

*Dred Scott  
decision  
cancelled.*

# LAYING OF THE ATLANTIC CABLE

(A.D. 1865)

W. H. RUSSELL

SEVEN years ago <sup>1</sup> a metal strand, enveloped in gutta-percha, was laid in the bed of the Atlantic from Ireland to Newfoundland. For a few weeks the obedient current, creeping feebly through its narrow viaduct, flickered from end to end, and moved the magnet to speak. But waning in force, and flowing from out unseen wounds into the night of waters, the electric fluid, which is the vital blood of telegraphy, died out altogether in mid-ocean. The needle made no sign. How or why this came to pass no one can say. All that is known may be summed up in the fact that there was a fatal fault, or dead earth, in the insulating cover of the copper wires, and that the electricians, detecting its influence on the escape of the current, endeavored to stimulate the moribund body by augmenting the power of the batteries. We all know that lightning, as a general

*Line laid in 1858.*

<sup>1</sup> 1858.

*A "fault"  
discovered  
in the wire.*

rule, takes the nearest course between two points, but the law is influenced by surrounding conditions. When a fault occurs in a cable, for instance, some of the current escapes into the sea, and some of it travels along the wire to the terminus. The force of the current is regulated by a well-defined law. When the fault is so great as to allow the copper to come in contact with a perfect conductor, all the electricity marches through the dead earth, and is lost. The operators in those days, seeing the indications of the needle weakened, thought they would make up for the consequences of the fault by increasing the force of the current. They multiplied their plates and soon brought the disease to a climax, and aggravated the causes of death to rapid issue. The last word traced by the hand of the deceased cable was "Forward." The message came from the New World to the Old, and it has been accepted as a legacy by the executors. Now, that cable of 1858, though it had a short life, and not a very merry or useful one, was a great fact. It was a demonstration forever of two matters concerning which men might otherwise have been contending fiercely—one was that a cable could be laid in the depths of the sea from Ireland to Newfoundland; the other, that messages could be sent with remunerative rapidity from one end of it to the other. The trial of 1857 failed so completely that, but for the renewed effort and its successful issue in 1858, there would have been doubters up to this day whom the experiment just concluded so abruptly would

*Short life  
of the first  
cable.*

not have converted to a sound belief as to the actual practicability of laying the cable. There are people now who say they have a strong suspicion no message ever went through the cable of 1858 at all. The interchange of civilities between the Queen and President Buchanan—the last of the Washington Doges—was, they aver, “a got-up thing.” There are hundreds of messages—copies and originals—to be seen; but the *doctores dubitantium* do not care to see them, will go on shaking their heads till their tongues cease to wag. The cable failed then, and the anticipations of the great benefits to both countries from a rapid interchange of ideas and news were not realized.

*Genuine-  
ness of  
messages  
doubted.*

It was ten or twelve years, however, after submarine cables had been in common use in European seas, that one was laid under water from one point of land to another of the American continent; and it was an Englishman, Mr. Gisborne, who gave the first impulse to the idea of an Atlantic cable, and who actually connected Newfoundland with the mainland by submarine telegraph. The original project was to run a line of steamers from Galway to Newfoundland, and to use the submarine line for the transmission of news to Boston and New York. The legislatures of the British provinces encouraged it by extraordinary charters and privileges, which drew from the home government an intimation that they would not sanction similar monopolies. The promoters soon exhausted their money, and Mr. Gisborne repaired

*Mr. Gis-  
borne's  
early  
success.*

*Cyrus Field  
interested.*

to New York to interest capitalists in the undertaking. There he met Mr. Cyrus Field, who, thinking over the subject, was led to inquire if it would not be possible to lay a cable between Ireland and America.

*Results of  
the failure  
of 1858.*

After the breakdown of 1858, the enterprise failed out of men's minds, but the Atlantic Telegraph Company still existed, and Mr. Field never ceased to agitate by every means in his power the great question of his life. It was, however, British capital which furnished the means for the last expedition, just as it was British manufacturers who made the cable, and British ships, sailors, and engineers who were engaged in laying it. Well, it was a failure—that can not be controverted; but it was one of those glorious failures which mark out the road to ultimate success. It marked out many places on the map of electrical discovery which were hazy and uncertain.

*The Great  
Eastern.*

When the *Great Eastern* started, it was averred by the first authorities that want of success could only arise from some source then overlooked and unsuspected. Alarmist theories respecting the strength of the ship herself, and the wanton appetites of sharks and whales, were propounded without any foundation; but no one seemed to apprehend the least danger from the wire in the external coating of the cable, from which, eventually, all the mischief arose.

Now it made a very long story in the papers—all that was done and suffered. Put it into the nutshell of a page,

it is this:—First fault discovered on 24th of July when we were in 400 fathoms of water; more than six hours elapsed before the cable was cut; two hours more before the end so cut was hauled in over the bows; twenty-four hours (9.30 A.M. on July 25th) before the fault came on board; in five hours more the cable was let run out astern again. Now in all these operations the strain never exceeded 35 cwt. at paying-out machine and 36 cwt. in picking up. This great result gave all on board a ruinous confidence. To pick up the cable so easily was to reduce the operation to a *facillimum*. Then on July 29th, when the second great impediment took place, not much more than two hours elapsed between the electricians' warning and the cutting of the cable; but twelve hours rolled on before the end was got in over the bows, and nearly six hours more was spent in picking up till the fault (dead earth) came on board. More than eleven hours were devoted to preparing the cable for its next committal astern to the deep. During the second operation the strain at the stern dynamometer, or paying-out apparatus, was the same as it was on the occasion of the first fault, and it did not exceed 50 cwt. at the dynamometer in the bows while the picking-up was going on. Third and fatal fault, August 2d; not more than two hours elapsed between discovery of fault and cutting of cable, and in an hour and a half the end was over the bows and picking-up commenced; but owing to the lie of the ship and the drift of the wind, and possibly of the

*First fault  
discovered*

*Ruinous  
confidence.*

*Position of  
the break.*

current, the strain rose up to 50 cwt. and then to 64 cwt. In about five hours 2.04 miles nautical had been picked up, and then the cable parted and sank *in profundis*. Now the breaking strain of the cable is 7.75 tons, so that unless there was an exceeding violence in a pick or considerable deterioration from chafing there was no reason why it should have parted in the course of picking-up. Subsequently the grappling experiments afforded satisfactory evidence that the depth of water under the ship was somewhat less than two nautical miles when the cable broke. At that time there were 1,082 miles of cable left on board, and the ship had receded about two miles toward the last. Just 1,186 miles of cable were out in a straight line, and the distance from Valentia was 1,063 miles, and from Heart's Content 603 miles. The public who are not shareholders were probably more interested in the attempts to pick up the cable than in the proceedings connected with laying down and recovering it. When the grapnel was let go there was little expectation that it would catch anything; the greatest strain denoted while paying out the line 2,500 feet long was 80 cwt., which was indicated at 10.20 P.M. of August 2d, but at 6.45 A.M. next morning, as they were hauling it in, the strain rose to 85 cwt., and when soon afterward it increased to 90 cwt., the spur wheel of the machine broke. That strain was due to the rapid motion of the picking-up drum and the great friction; because when the capstan was used in lieu of the machinery and engines, the

*Strength of  
strain used.*



dynamometer index fell to 60 cwt., and finally the swivel bolt failed and down went 1,400 fathoms of wire buoy rope and the grapnel and cable held by it. On the 7th, after another grapnel with 2,400 feet of rope had been down more than five hours, the strain began to rise from 50 cwt. to 58 cwt., and finally to 66 cwt., and the ship's head came round to the wind. In an hour after we began to heave up, but the strain did not increase materially for a couple of hours, when it rose to 67 cwt., and soon afterward to 75 cwt. It stood for more than two hours at 75 cwt., then ran up to 78 cwt., finally to 80 cwt., and then the swivel of a shackle broke on the capstan, and another grapnel and mass of wire rope were lost. This occurred about four and a half miles from the end of the cable in lat.  $51^{\circ} 25'$ , long.  $38^{\circ} 56'$ , bearing S. 14 E. When the fouled grapnel was over with 2,460 feet, on August 10th, the highest strain as the ship drifted was 56 cwt.; and it never increased in the picking-up beyond 70 cwt., from which it fell in eight hours to 25 cwt. till the grapnel was hauled in. On the last attempt the strain was at 65 cwt. when picking-up began, and ran up to 90 cwt. in two hours and a half, and in half an hour more was at 100 cwt., when the last rope broke.

The course on which the ship was kept was an arc of the great circle, passing through Valentia and Heart's Content, which is only some 16 miles shorter than the line on Mercator's projection. It possesses the advantage, however, of running over known soundings, along the

*The course  
of the  
Great  
Eastern.*

*No certain  
knowledge  
of the  
ocean's  
greatest  
depths.*

course of what is called the Atlantic plateau, which presents a surface of ooze beneath a depth of water varying from 1,700 fathoms to 2,400 fathoms. The deepest part, therefore, is about two and a half nautical miles (2,000 yards each) deep. No one knows anything very positively about the ocean at these great depths. It is urged that there must be utter darkness there, but then starfish with traces of color have been taken up by sounding apparatus; and if they come up from the bottom, it is inferred there must be some rays of light penetrating there, or the colors would not exist. The pressure of the water itself is very much exaggerated, but it may be fairly assumed that it is very obscure down there, and that if anything can exist at all it must be very dull living. When the substance called ooze came up on the grapnel line of the *Great Eastern*, from a depth of nearly two miles, it was simply a light-colored mud, like that which a heavy shower makes in the streets of London.

*The United  
States buys  
Alaska.*

[In 1867, there is an abortive Fenian rising in Great Britain. The North German Federation is established. Parliamentary government with two houses is established in Austria. The Dominion of Canada is formed, a Governor-General appointed, and a Federal Parliament meets at Ottawa. The United States buys Alaska from Russia. In 1868, Queen Isabella of Spain flees to France. Congress passes the Force Laws against the Ku Klux and other secret societies.]

# THE EXPULSION OF QUEEN ISABELLA

(A.D. 1868)

MARTIN A. S. HUME

A NEW Cortes was to be elected at the end of 1863, and in its manifesto the Government signified its intention of allowing a fair proportion of both parties to be elected and to return to the system of party Government which the Union Liberal had destroyed. But at the same time they forbade any but electors to attend political meetings. There was nothing very new in this, for it had been done before, but the advanced Liberals made it their excuse for retiring altogether from the contest, and abandoning open political action. This meant, sooner or later, a Liberal revolution, and so it proved. The advanced Liberals threw upon the Queen the odium of their retirement. She had, they said, refused to dissolve Parliament for a moderate Liberal Government, in order to discredit the party, and had dissolved Cortes without difficulty at the bidding

*Retirement  
of the  
Liberals.*

of a ministry whose tendency was Conservative. It was clear then, they asserted, that while Isabel reigned no Liberal ministry would be allowed to govern, whatever professions of attachment she might make to them for her own objects.

*Programme  
of Mons  
and  
Canovas.*

The retirement of the Liberals deprived the elections of all interest, and the Government party of cohesion and authority; the result being the accession of a more strongly Conservative ministry under Arrazola, which, however, fell after a few days on their demand for another dissolution; when they were succeeded by a semi-Liberal combination headed by Mons and Canovas, whose programme was purity of election, loyalty to the Constitution (of 1845), and greater freedom of the press. But it was clear to all observers by this time that parliamentary government had broken down. The unblushing manipulation of elections, and the Queen's erratic exercise of her prerogative of dissolution, with the retirement of the Liberals, had turned the whole business into a discredited farce, of which all honest men were tired.

*Meddling  
of the King-  
Consort.*

The impatience of the country was still further aroused by the meddling of the King-Consort, who had gone to Paris to return the visit of the Empress Eugénie, and on some inducement never understood had entered into an undertaking with Louis Napoleon for the recognition of Victor Emmanuel as King of Italy, and the return to Spain of the detested Cristina. This neither

Isabel nor the Government could stand, and the latter retired; the Queen, at her wits' end, then consulted O'Donnell, who recommended the nomination of a purely Conservative ministry, to which he promised his support in order to hold democracy in check. This, of course, meant Narvaez, who formed a ministry with Gonzales Brabo at the Home Office, but refused O'Donnell's proffered co-operation.

*Narvaez  
forms a  
ministry.*

The Liberals, now under the leadership of Prim, for old Espartero had finally retired, still stood aloof; and the cloud of coming revolution loomed blacker than ever. The sale of the mortmain properties, which had supplied O'Donnell with abundant funds for several years, had now nearly come to an end, and money was scarce again; the Queen surrendered three-quarters of the royal patrimony to meet national expenditure, but it was all in vain, for the Government grew more unpopular every day. Again Narvaez's favorite remedies, the gag and the stick, were used ruthlessly; Castelar was dismissed from his professorship and the Rector of Madrid University deprived of his post, peaceful citizens were trampled on and killed by soldiers,<sup>1</sup> elected town councils were arbitrarily dismissed and replaced by nominated bodies, and in the meanwhile underground conspiracy spread its

*Liberals  
stand aloof*

*The Queen  
is alarmed.*

<sup>1</sup> The terrible scenes of slaughter and outrage upon inoffensive people for the simple purpose of infusing terror, on the night of Saint Daniel, April 10, 1865, in Madrid, must be laid at the door of Gonzales Brabo alone. Narvaez was ill and failing, and was not at this juncture in favor of the iron tyranny of his colleague.

fibres throughout Spain, Prim being the motive power of the coming revolt.

*Power  
of Prim.*

The Queen took fright and summoned O'Donnell in June, 1865, to try and win back the Liberals to parliamentary action, and he formed a Government for the purpose, with Posada Herrera and Canovas as members. But Prim, Sagasta—editor of the *Iberia*—and the rest of the Liberals resisted all attempts to entice them into the net again. In vain a Liberal policy was followed; Italy was recognized, reduction of the franchise and electoral purity promised, the Bleeding Nun, Sister Patrocinio, and the Queen's confessor, Father Claret, were once more banished; other personages even more objectionable were sent away from the palace, and Prim was ostentatiously courted, notwithstanding his known disaffection. But it was too late, for the Queen grew daily more divorced from her people as the scandals about her increased, for the Liberals, who were formerly her champions in this respect, were silent now.

*Cholera  
and  
rebellion.*

All through the autumn of 1865 cholera raged in Madrid, and risings, small but significant, took place in various parts of the country, the Queen in the meanwhile resentfully remaining in retirement contrary to her usual custom when her people were in trouble. A military rising was planned by Prim for January, 1866, but the affair missed fire through ill direction; and of the large force which promised aid only two regiments of cavalry joined him at Aranjuez. Followed by the Gov-

*Prim plans  
a military  
rising.*

ernment troops, he escaped to Portugal, and the failure of this widespread conspiracy, which was revolutionary like that of 1854, but not anti-dynastic, sealed the fate of Isabel's throne.

Prim continued to conspire from his exile in France, but he no longer shut his eyes to the fact that the success of a military revolt was not now possible, and if a popular movement accompanied it, the result, to use his own words, would be "to throw the throne out of the window." He faced this possibility, and organized a great rising of troops, in union with the democrats and Liberal civilians, to start from Valladolid in May, and to spread along the whole line between Madrid and the French frontier, the principal active agents being the non-commissioned officers of the various regiments. After several false alarms and much disagreement, the artillery sergeants in the barracks of San Gil in Madrid revolted on the 22d of June. They had not intended to kill their officers, but on the resistance of the latter they did so; and followed by 1,200 men with thirty pieces of artillery, posted themselves at strategic points of the city. The troops which remained loyal, however, under O'Donnell and Serrano, overcame the mutineers in the Puerta del Sol and at the barracks, with terrible slaughter, after ten hours' fighting. The civilians who held barricades were more easily defeated; and the simultaneous risings in Valladolid and elsewhere melted away when the disaster of Madrid was known. The slaughter

*Revolt of  
sergeants.*

*Slaughter  
of pris-  
oners.*

of the prisoners horrified humanity; the constitutional guarantees were suspended, and a reign of terror was established at the bidding of the palace clique that disgusted even O'Donnell, grim old soldier though he was.<sup>2</sup>

*O'Donnell  
departs.*

For a time, thanks mainly to O'Donnell's energy, Isabel's inevitable fall had been delayed, but the besotted reactionaries who were dominant in the palace could not forgive the marshal for his insistence on the recognition of Italy and his coquetting with liberalism; and on July 10, 1866, he understood by the Queen's attitude toward him that his position was undermined, and for the last time he threw up his post. As he left the misguided woman, the last prop that sustained her throne crumbled. Swearing never to cross the threshold of the palace again while Isabel II. reigned, he turned his back on Spain to tread its soil no more, for before the end of the following year the descendant of the great Ulsterman, O'Donnell the Red, slept in his splendid tomb at the Atocha.

Narvaez and Gonzales Brabo came back again, but with somewhat chastened hearts. They promised oblivion and forgiveness and the Liberals came out of their hiding; but the palace clique, with the Marquis of

<sup>2</sup> He is said to have replied to a courtier who urged that more sergeants should be shot: "But does not this lady (*i.e.*, the Queen) understand that if we shoot all the soldiers we catch, the blood will rise up to her own chamber and drown her?" There were sixty-six executions, but it is difficult to believe the assertion that the Queen herself was not on the side of mercy.



Orovio, General Calonge, and other extreme reactionaries, forced the hand even of Gonzales Brabo, who could only privately advise the betrayed Liberals to fly before it was too late. The result was an exodus of all those who had ever taken part in Liberal movements, and the Government was irresistibly swept along the current of reaction until its decrees became such as would have shamed Fernando VII.

*Flight of  
the Lib-  
erals.*

All legality was trampled under foot, all guarantees forgotten, all liberty crushed. Taxes were extorted in advance, municipalities dissolved, the electoral laws altered by decree, the press and speech, public and private, suppressed. Dismay, almost panic, reigned supreme; ruined shopkeepers put up their shutters in every town, merchants closed their counting-houses, money wellnigh disappeared from circulation—for it will be recollected that even in London at the time the Bank rate was ten per cent—and the great cities of Spain were like communities in mourning. The more moderate members of the Cortes attempted to petition the Queen for redress, but the Captain-General of Madrid trampled upon “the rights” of Parliament and shut the doors against the members; the President, Rios Rosas, and the permanent committee being banished. General Serrano, a duke and grandee of Spain, the Queen’s earliest friend, personally dared to remonstrate with her; and he, too, was driven into exile to join the conspirators

*The gen-  
eral panic.*

who were already perfecting their plans in France, Belgium, and England.

*The new  
Cortes.*

Under these circumstances the new Cortes, meeting earlier in 1867, was a farce. Canovas del Castillo and a few other Conservatives vigorously opposed the insensate tyranny of the Government, but without effect; official senators who dared to vote against the Government were dismissed, and Gonzales Brabo, with a parliamentary ability which has rarely been equalled, made the worse appear the better reason, and obtained for himself—an unpopular civilian—a practical dictatorship.

In the meanwhile the exiles were not entirely united. The central direction of the revolution was in Brussels under Prim, but a republican organization, with Pi y Margall and Castelar, met in Paris, while several friends of Prim were in London. From the first the difficulty was what could be devised to replace the present *regimé*. “Down with the Bourbons!” was the popular cry; but Prim and Olozaga would not have the question prejudged: all must be left for the elected of the people to decide after the success of the revolution was attained.

*Olozaga's  
policy.*

This was Olozaga's policy, and was no doubt considered wise in order to unite all the discontented under one banner; but it was a fatal mistake, as events proved, for it only delayed division to a time when division was destructive. Efforts were made to enlist the name of old Espartero in the coming revolution; but he had done with politics, and refused his countenance, and the ex-

treme democratic party and the republicans were far from unanimous in aiding Prim without knowing what was to follow.

In these circumstances the latter could only look to his own friends for funds and could barely collect enough for the humblest preparations. When, at length, in accordance with the plan agreed upon, he entered the port of Valencia from Marseilles in July of 1867, he found that his promise to abolish conscription had offended the officers upon whom he depended; and he had to return to France unsuccessful. Simultaneous risings took place in Cataluña, Aragon, Valencia, and Castile; but they all failed, for there was no united plan of proceeding, and no definite understanding as to the final object. Manifestoes and counter-manifestoes rained plentifully. The Government called the revolutionists perjured traitors, and these retorted with accusations of tyranny and oppression; but it was now evident that Prim alone had not command of sufficient resources or prestige to succeed, and it was necessary to form fresh combinations.

*Prim's unsuccessful attempts.*

Don Carlos, ever on the lookout for a chance, approached Sagasta and Prim, who was in London, and the former had a long interview with Cabrera; but though the Carlists were pliable, Prim put his foot down heavily, and the suggested fusion fell through. A more promising recruit was found in General Serrano; and with him a more powerful auxiliary still, who was able to provide what was required more than anything else—

*Don Carlos*

*The Duke  
of Mont-  
pensier.*

namely, money. The Duke of Montpensier, whose marriage with Isabel's sister had caused so much heart-burning, had sunk into political insignificance with his father's dethronement and the rise of Louis Napoleon; but he had lived a peaceful, happy, and respectable life with his family, managing thriftily his wife's vast property in Andalusia. He was, however, like most of his family, a man of business; and when it became evident that his sister-in-law's throne was to go begging, he apparently thought that his wife and children's chance of obtaining it should not be neglected. He was excessively rich and could afford to risk something for such a prize; but he was frugal and undertook but grudgingly to finance the revolution.<sup>3</sup>

What conditions he made with Serrano and Admiral Topete and what pledges they gave him are still a mystery, but it is certain that Prim declined to bind himself beyond the overthrow of the existing state of things and the election of a Constituent Cortes. Out of this tacit, if not expressed, difference between the leaders of the revolution, the whole of the subsequent trouble arose. The nation was not in a condition to be able to choose calmly and judiciously its own institutions, and it was the duty of those who overturned the old order of things to have

<sup>3</sup> Prim wanted from £40,000 to £60,000 for the revolution, and when Montpensier sent him £4,000 to London by Señor Mazo for the purpose, Prim refused to undertake a rising for such a sum. The Duke subsequently contributed £4,000 more, so far as is known, but probably a much larger sum was provided secretly by him through other channels, especially for the rising of the fleet.

another ready to replace it with a strong hand, if necessary, to impose what they deemed best. Montpensier, it may be granted, was a foreigner and unpopular, but his wife was not; and they were both sensible and of good repute, and would have been, at all events, preferable to the chaos which followed the revolution.

Narvaez died in April, 1868, and Gonzales Brabo, *Death of Narvaez.* Orovio, and Marfori <sup>4</sup> (Marquis of Loja), the Queen's great friend, formed a ministry pledged to utter reaction and undisguised tyranny. An attempt of the Cortes to meet in session was violently repressed, and all the lead- *Arrest of leaders.* ers of opinion not favorable to the ministry were arrested and banished, among whom were Generals Serrano, Dulce, Cordoba, Zabala, Serrano-Bedoya, Caballero de Rodas, Hoyas, and Letona, and Rios Rosas, the President of the Cortes, while the Duke and Duchess of Montpensier were deported to Lisbon.

In the critical situation the Government was unwise enough to allow the Queen and her family—accompanied by Marfori, chief of the palace—to go to Le- *Isabel goes to Lequeitio.* queitio, on the Biscay coast, for sea-bathing, and while she was there, on the 19th of September, 1868, Rear-Admiral Topete, in command of the squadron in Cadiz

<sup>4</sup> This person had been an actor and was the son of an Italian cook. He was soon withdrawn from the ministry to take the place of superintendent of the royal household, a position which brought him into constant contact with the Queen, who was much attached to him. But for Isabel's indignant refusal to dismiss him from her side at the critical moment of the revolution, when her return to Madrid was contemplated, her crown might even yet have been saved.

Bay, raised the flag of revolt. He had long been distrusted by the local governor, and only shortly before his declaration many arrests had been made among the men in garrison in Cadiz; but his cleverly worded manifesto denouncing the tyranny of the Government and calling for a Constituent Cortes and a return to an honest parliamentary *régime*, fell like a bombshell in the ranks of reaction. This was the spark which all Spain was waiting for, and it caught fuel that blazed out irresistibly.

Prim, Sagasta, Paul y Angulo, and others, had embarked at Southampton on the 12th in the steamer *Delta*, and had landed at Gibraltar on the 17th, sailing thence on a steam yacht belonging to Mr. Bland to join Topete at Cadiz. Prim found the Admiral, whom he did not know, strongly in favor of the Duchess of Montpensier as constitutional Queen with Serrano as leader of the rising. With regard to the latter, Prim easily agreed, for it was obvious that he was not powerful enough in the army to head a successful national revolt; but on the point of sovereignty he would not move from his principle of leaving everything to a Constituent Cortes; and with this, Topete, who was no politician, had to be contented. As neither Serrano nor the exiled generals from the Canaries had yet arrived, however, and Topete dared no longer delay, Prim was appointed to the interim command; and the citizens of Cadiz were delighted, on the morning of the 19th of September, to see the ships of the squadrons dressed with flags, and to hear the

*Prim in  
command.*

cheers of the crews, the Hymn of Riego, and the thundering of the cannon, which announced the fall of the ancient Spanish dynasty. When Prim and Topete, followed by Serrano, landed in Cadiz, and the exiled generals from the Canaries joined them, there was no doubt of success. Cadiz went wild with joy; Seville followed suit: the telegraph carried the great news through Spain, and, as if by magic, the whole country rose.

To the last moment Gonzales Brabo, who was with the Queen on the north coast, had lived in a fool's paradise, scoffing at all warnings; and the successful revolution came upon him like a thunderclap. While his colleagues in Madrid were praying him to come back, and proclaiming martial law, he could only desert the falling edifice, and recommend the Queen to appoint a military dictatorship under Manuel Concha, Marquis of Habana, who, collecting such forces as remained faithful, sent General Pavia, Marquis of Novaliches, to meet Serrano and the revolting army of Andalusia, which was advancing on Madrid; while other loyal generals were told off to hold in subjection the north and centre of Spain.

*The revolution breaks out.*

Serrano left Cordova on the 24th of September to meet Pavia, who stood in his way toward Madrid with 9,000 infantry, 1,300 cavalry, and 32 guns. The armies met on the plains of Alcolea, with the famous bridge, the scene of so many struggles, between them. From the first Pavia knew that success was hopeless, for the

*The battle of Alcolea.*

revolt had awakened the sleeping land like a bugle call, and Serrano's force was the larger; but he was the soul of loyalty, and sorrowfully resolved to fight to the last in a lost cause. The bridge had been seized by Serrano's General, Caballero de Rodas, and there the principal struggle took place. "Viva la Reina!" cried the Government soldiers, as they rushed to storm it; and "Viva la libertad!" was the reply of the defenders. Soon both detachments were firing from behind parapets of corpses, and on all sides across the plain the bitter conflict raged, abounding in instances of pitiful generosity and chivalry, as well as in brutal fury; while honest John Rutledge, the Northumberland engineer, who had run down from Cordova on his engine by the line that overlooked the battlefield, worked like a beneficent giant helping the wounded and the dying. As night closed in, both armies were exhausted, for 1,000 men had fallen, and Pavia himself had had his nether jaw shot away. It was clear that Serrano could not be beaten back, and during the night the Queen's troops retired—those who did not join the insurgents—and Serrano's road to Madrid was free.

*Triumph of  
Serrano.*

In the meantime Gonzales Brabo had fled, and Concha's Government in Madrid was a prey to utter distraction; the Queen alone keeping a stout heart. She would go to Madrid and brave the rising; she would, indeed, at one time, have gone to Cadiz and exerted her personal influence on the generals: but as news came day



by day of fresh ships or regiments revolting, ominous whispers of abdication in favor of little Alfonso, with old Espartero for Regent, were rife. But these were counsels of despair: and the Queen would not listen to them. Again and again she was ready to start for Madrid with all her Court; but Concha, who knew where the danger lay, always stopped her with a telegram, insisting that if she came she must come *alone*, or accompanied only by her children. She knew—all the world knew—what *alone* meant, and with tears of rage, that any man should dare to dictate to her—a Queen—the choice of her servants, she would tear up the ministers' telegrams and stamp them with fury beneath her feet; while the stout, coarse-looking man, with the sallow face, behind her, and the frail, gentle little consort by her side, could only bow to her imperious will.

On the 29th of September the news of the defeat of Alcolea reached her; and in quick succession, the intelligence of the unanimous rising of Madrid, the deposition of the Bourbon dynasty, and the formation of a provisional government. All through that night the distracted Queen and Court discussed the next step to be taken, and a dozen times the train, with its engine toward France, was ready in San Sebastian station and again countermanded. But as the thunder-peals of revolution drew nearer and nearer, and the French Cæsar, a few miles off at Biarritz, could offer nothing but sym-

*Isabel  
deposed.*

pathy and shelter, Isabel II. accepted the inevitable and went into exile.

*The Queen  
leaves  
Spain.*

With tears coursing down her fat, good-natured cheeks, but still with a proud port befitting a Queen, leaning on the arm of her husband, and with Marfori behind her, she entered the railway carriage which bore her over her frontier into France. A few weeping subjects blessed her and touched the hem of her garments as she passed, for the dregs of the great love the people had borne her still lingered; but her thoughts must have been gall and wormwood to her fond, proud heart; for in this very corner of her dominions hundreds had cheerfully laid down their lives for her. Even as her father had done before her, though not so wickedly, she had frittered away, by her faults and caprices, the ardent devotion of a loyal people, and lost the ancient crown which her ancestors had worn for well-nigh a thousand years. She went into exile with wounded pride, grief, and anger contending for the mastery: and her last official words on her own soil to the local authorities who took leave of her as she crossed the frontier, were the bitter words, "*I thought I had struck deeper root in this land.*"

*Suez  
Canal  
opened.*

[In 1869, the Anglican Church is disestablished in Ireland. Russian gains control of the South German fortresses. Serrano is declared Regent of Spain. The Hudson Bay Company's territories are sold to Great Britain and incorporated with Canada. The Suez Canal is opened. Japan abolishes the feudal system.]

# THE SUEZ CANAL

(A.D. 1869)

J. W. GROVER

FOR a period of about twelve centuries and a half, from the time of Darius to that of Omar, various attempts had been made to connect the waters of the Nile with the Red Sea; and in all these projects we note that the projectors always had in view the formation of a fresh-water canal. The idea of connecting sea to sea in a direct course never seems to have occurred to them. *Early attempts to connect the Nile with the Red Sea.*

For over a thousand years after the times of Omar, the work was abandoned, and the next attempts were inaugurated by the French under the great Napoleon, who, during his occupation of Egypt, turned his genius toward the subject. He caused a survey and a report to be made of this great work of antiquity, under the direction of M. Lepère, a French engineer of high standing; and no doubt, if the French had been successful in Egypt, something would have been done toward the realization of the scheme. Without entering very precisely into the proposals of M. Lepère, it may be said

*Lepère's  
plan.*

generally that they were founded on the same great error which had defeated the ancient plans, viz., that the Red Sea was higher than the Mediterranean by a mean height of *twenty-seven feet and a half*, and he made the mean height of the Nile at Cairo the same; but as the river rises and falls twenty-three and a half feet, whereas the Red Sea does not vary more than five and a half feet, he proposed to construct the canal in sections, having locks between them, to govern the differences in height at various times. The line he proposed was first from Buebastis to Seneka (or Abaceh), a distance of about twelve miles; the second length extended as far as Scrapium, and was to be thirty-eight miles long; the third section, of twenty-seven miles, extended through the Bitter Lakes; and the fourth length, from them to the Red Sea, a distance of about thirteen miles. He estimated the cost of these works at £691,000 sterling; but with a number of accessories he brought up his figures to nearly £1,250,000. It is only fair, however, to M. Lepère to say that he spoke favorably of a direct cut from sea to sea. That distance is, in a straight line, about seventy-five miles; but, as surveyed, his canal would have been about ninety-three miles long.

*Linant  
Bey's  
proposal.*

In the year 1847, a French engineer, M. Linant Bey, in the service of the Egyptian Government, proposed to carry a canal from the Red Sea, through the Bitter Lakes to Lake Timsah, and thence through the lagoons of Lake Mensaleh to Tinch (Pelusium) on the Mediterranean;

and on the assumption that the levels of M. Lepère were correct, he calculated that there would be a flow through the canal of three or four miles an hour.

At that time, however, our own eminent engineer, the late Robert Stephenson, M.P., appeared upon the scene, and under his auspices a careful set of levels were taken across the Isthmus, which revealed the curious and important fact that there was no essential difference between the two seas at low water, and at high water the difference was not more than four feet. This discovery seems for a time to have deterred further enterprise, it being Mr. Stephenson's opinion that the canal could not be kept open without a current through it.

*Robert  
Stephenson's  
discovery.*

About four years after, the project was again revived by M. Ferdinand de Lesseps, to whom the Khedive of Egypt granted the concession of making a canal direct from sea to sea, besides subscribing substantially to the undertaking. At the instance of M. de Lesseps, an international commission of engineers was appointed to examine and report upon the plans; and under their direction an exact survey was made of the country, and fresh levels were taken, which confirmed Mr. Stephenson's statement that the two seas were virtually the same level. It was now proposed that a canal should be excavated having a depth of 8 metres, or 26 feet 3 inches; and a width at the water-level of 80 metres, or 262 feet. The estimate for this work was £6,500,000; and it was proposed to form a company, with a capital of £8,000,-

*M de  
Lesseps  
receives  
the project.*

ooo. It need hardly be observed, that the works have cost double that amount.

*Colonel  
Chesney.*

It would not be fair to omit the name of Colonel Chesney among the list of those eminent men who foresaw the practicability and advantages of a direct connection from sea to sea. In 1830, he examined the country, and says: "As to the executive part, there is but one opinion. There are no serious difficulties; not a single mountain intervenes, scarcely what deserves to be called a hillock. In a country where labor can be had without limit, and at a rate infinitely below that of any other part of the world, the expense would be a moderate one for a single nation, and scarcely worth dividing between the great kingdoms of Europe, who would all be benefited by the measure."

*Work  
of M. de  
Lesseps.*

Having thus glanced at the general history of the earlier Suez canals, which were all more or less abortive, I will endeavor, in as concise a form as possible, to describe the wonderful work of M. de Lesseps.

The whole length of the Canal, from Port Said to Suez, may be taken at eighty-eight geographical miles; of this, sixty-six miles are actual canal; and twenty-two miles of the navigation run through three lakes, viz., Timsah and the Great and Little Bitter Lakes. In all cases, however, except for about eight miles, it was necessary to excavate to obtain the required depth. The width of the Canal at the surface varies from 325 feet to 195

*Width of  
the Canal.*

feet; and its floor is 72 feet wide, the depth of water being 26 feet; the general slope of the excavation being 2 to 1, but considerably flatter where the surface of the water impinges. At every five or six miles between Port Said and Lake Timsah—the whole distance being forty-two miles—there is a “gare,” or siding, to allow large vessels to bring up in, either for the purpose of passing each other or to moor for the night.

The greatest difficulty anticipated was that the large quantity of deposit being constantly carried eastward from the Nile would rapidly form a shoal across the entrance to the Canal at Port Said. M. de Lesseps, however, boldly confronted this difficulty, and his decision has been justified by the event. He has thrown out two formidable breakwaters on both sides of the Canal, inclosing an area of 450 acres, and extending as far as 6,940 feet to sea on one side, and 6,020 feet on the other. These form a good, quiet harbor, and effectually keep out the silt. The breakwaters are made of loose blocks of artificial stone. At Suez, the port of entry is easy of access. A breakwater here protects the entrance from southerly winds.

*The breakwaters.*

From the Nile at Cairo to Ismailia there is a fresh-water canal, which connects with the maritime canal there by means of two locks. About three miles before reaching Ismailia, an arm of this fresh-water canal branches off, and runs alongside of the main Canal to

*The fresh-water canal at Ismailia.*

Suez. The depth of this fresh-water canal is about four feet. There is also a railway from Suez to Ismailia along the route of the Canal.

*Value of  
the Canal.*

To show the enormous value of this work to all Indian and Chinese interests, it may be sufficient here to state that the Canal route saves very nearly one-half the distance between the English Channel and Galle, the distances being round the Cape of Good Hope, 11,650 miles, and by the Canal, 6,515; or a saving of 5,135 miles, or in point of time, thirty-six days.

*The  
Company  
formed  
in 1854.*

It was in the year 1854 that Mohammed Said succeeded Abbas Pacha. On the 15th of November, in that year, M. de Lesseps submitted to him a memorial advocating with grand simplicity and power the advantages of this grand project. On the 30th of November, the concession was signed, inaugurating a Universal Company for piercing the Isthmus of Suez. Then the English representative asked the Viceroy how he expected the work could ever be accomplished. To which Mohammed Said replied, "that M. de Lesseps having entitled his company 'Universal,' all nations would be invited to contribute to its capital." M. de Lesseps himself announced, in these terms, to the English agent, the signing of the firman: "I come as the friend of peace and of the Anglo-French alliance, to bring you that which will contribute to realize the saying, '*Aperire terram, et dare pacem gentibus.*'"



A.D. 1869

## THE SUEZ CANAL

[In 1870, the Franco-Prussian war breaks out, the French troops are recalled from Civita Vecchia and the Italian troops bombard and occupy Rome, ending the temporal power of the Papacy. The son of Victor Emmanuel is chosen King of Spain. A revolt of Indian half-breeds on the Red River is suppressed. Diamonds are discovered in the Orange Free State. Board Schools are established in England. Infanticide is prohibited in India.]

*End of  
the Pope's  
temporal  
power.*



# THE FRANCO-GERMAN WAR

(A.D. 1870-1871)

JAMES SIME

EARLY in July, 1870, Leopold, the hereditary Prince of Hohenzollern, at the request of the Spanish Government, and with the permission of King William of Prussia as head of the Hohenzollern family, became a candidate for the Spanish throne. The Emperor Napoleon, who had never heartily accepted the reconstitution of Germany, and who was anxious for an opportunity to establish his waning popularity in France, resolved to make Leopold's candidature the pretext for a war with Germany. A cry was raised in the French Legislative Assembly that a foreign Power was about to place one of its princes on the throne of Charles V. A section of the French people took up the cry, and called loudly for the submission of Germany to the wish of France. To take away all cause of dispute, the Prince of Hohenzollern formally resigned his candidature on July 12. Not content with this triumph, Napoleon insisted that the King of Prussia should give an assurance

*France  
declares  
war against  
Prussia.*

*The French  
ambassador  
-nubbed.*

to France that the candidature of the Prince of Hohenzollern would not be renewed. M. Benedetti, the French ambassador, came on the 13th to Ems, where the King was staying, and on a public promenade urged this demand. King William not only refused to grant it, but declined to listen further to M. Benedetti on the subject. An official telegram from Ems informed the German Governments of this fact next day. War had now become certain, and the King hurried toward Berlin. On the 15th he was met at the Brandenburg station by the Crown Prince, Counts von Bismarck, von Moltke, and von Roon, and informed of what had taken place that day in the French Legislative Assembly. All that was now wanting was the formal declaration of war. While still in Brandenburg, therefore, the King of Prussia gave orders for the mobilization of the North German army. Next day the Federal Council met, and expressed its hearty concurrence with the views of the Government; and on the 19th the Confederate Diet was opened by the King with a speech of great dignity and moderation. On the same day, the French declaration of war was received and communicated to the Assembly.

*The South  
German  
States re-  
main true  
to Prussia.*

Napoleon, misinformed as to the real state of Germany, had hoped that the South Germans, if they did not actually join France, would at least remain neutral. But, though in Bavaria and Würtemberg there were strong parties in favor of such a course, they were true to their engagements. On the 16th the King of Bavaria

and the Grand Duke of Baden ordered the mobilization of their troops; and next day the King of Würtemberg followed their example. On the 20th the South German princes formally announced to the King of Prussia that their forces were at his disposal; and the Prussian Crown Prince at once left Berlin to take the command of the united army. Throughout all Germany the prospect of the war excited much enthusiasm. It must not be supposed that the miserable Hohenzollern dispute had really anything to do with the war. It was of even less importance than the Schleswig-Holstein quarrel had been in the Austro-Prussian war. In a few days the world almost forgot that the Prince of Hohenzollern had been a candidate for the Spanish throne. What France was really about to fight for was the maintenance of her supposed supremacy in Europe. Germany had taken up arms in her own defence, and perhaps she was not unwilling to engage in a struggle by which she might thoroughly humble a Power that had for centuries lost no opportunity of adding to her divisions, robbing her of her territory, and depriving her of her just place among the nations.

*Real cause  
of the war*

The German army, including the forces both of North and South Germany, numbered more than a million men. This vast force was under the supreme command of the King of Prussia, whose chief adviser was again General von Moltke, head of the General Staff. It was divided into three armies, some part of each of

*Vast force  
of Ger-  
mans.*

*The Ger-  
man com-  
manders.*

which remained behind for the protection of the country. The first, under General von Steinmetz, was placed near Trier as the right wing; the second, under Prince Frederick Charles, assembled in Rhenish Bavaria; the third, consisting of the South German army and of three Prussian corps, and commanded by the Prussian Crown Prince, occupied the right bank of the Rhine from Mannheim to Rastatt. By the end of July these three armies were ready for action, and some skirmishing took place. But real fighting did not begin till next month. On August 4 the third army began its march toward the Lauter, and the first battle was fought at Weissenburg. The French were defeated, and the whole of the third army encamped on French soil. On the 6th a great victory was won by the same army at Wörth over Marshal MacMahon. The loss on both sides was heavy; but the defeat of the French was complete. They fled in such wild disorder that MacMahon's corps was for some time hopelessly scattered. The Crown Prince at once began his march across the Vosges mountains, leaving the Baden division to besiege Strassburg. On the day of the battle of Wörth a part of the first and second armies gained a brilliant victory near Saarbrücken. The bravery with which the heights of Spicheren were stormed has rarely been equalled. After this battle the whole German army entered France.

*The first  
battle.*

*Further  
victories.*

The three German armies now pressed on toward the Moselle. The scene of the great battles which were next



C. CURTIS MEY

AN. W. M. O. ART

THE DEUSE O CHAMBER - AN ENCAGEMENT IN THE FRANCO-GERMAN WAR (1870-71)

TO THE LION IN THE FIELD





fought, and which rapidly followed one another, was the country immediately in front of Metz. Marshal Bazaine, who had now assumed the supreme command of the French army, and who apparently wished to join MacMahon, began his march from Metz on the 14th; but he was attacked by a portion of the first German army at Courcelles, and driven back. Next day he again set out toward Verdun. On the 16th the battle of Mars-la-Tour or Bionville was fought. It continued from morning till night, and portions both of the first and second armies took part in it. The result was unfavorable to the French; but on the 18th they were still more decidedly defeated at Gravelotte, and obliged to take refuge in Metz. That fortress was instantly surrounded by the first and second armies, the supreme command of both of which was given to Prince Frederick Charles. The Prussian Crown Prince had awaited at Nancy the issue of the battles before Metz. His orders now were to proceed against Marshal MacMahon, who had reorganized and greatly strengthened his army at Châlons. To aid the Crown Prince in this difficult undertaking, a fourth army was formed from corps which had hitherto belonged to the second army. It was in the end placed under the Crown Prince of Saxony, and called the army of the Maes. The King of Prussia himself assumed the supreme command of the armies of the two Crown Princes. Both were in full march westward, and the Prussian Crown Prince had fixed his headquarters at

*Metz is surrounded.*

*Mac-  
Mahon's  
movements.*

Ligny, when the news came that Marshal MacMahon had left Châlons. It was soon discovered that he had been in Rheims, and was marching toward Rethel. It was therefore concluded that he was making for Metz, with the intention of operating with Marshal Bazaine against Prince Frederick Charles. The Germans at once turned to the right, and marched in pursuit of the enemy. MacMahon had concentrated his troops near Vouziers. On August 28 he advanced toward the Maes in the direction of Beaumont. Two days afterward an important battle was fought near the latter place, the result of which was that the French were driven toward Sedan, while the road leading to Metz was occupied by the Germans. MacMahon's great scheme was thus already baffled. The decisive battle of the campaign was fought on September 1. After severe fighting the French were driven from all sides into Sedan, which the Germans surrounded, and into which they were prepared to pour a destructive fire. Nothing remained for the French but to surrender. The Emperor Napoleon, who had for some time freely exposed himself on the battlefield, yielded his sword to King William; and next day the two monarchs had an interview. The conditions of the capitulation were agreed upon by Count von Moltke and General Wimpffen, the latter having assumed the command of the French early on the previous day, when Marshal MacMahon was disabled by a severe wound. All the troops in Sedan, amounting to 84,000 men, to-

*Battle  
of Sedan.*

*Terms of  
capitu-  
lation.*

gether with 50 generals and 5,000 other officers, yielded themselves prisoners of war, while the entire war material of the army became the property of the Germans. Those officers who passed their word of honor to take no future part in the war were set free. The Emperor Napoleon received as his residence the Castle of Wilhelmshöhe, near Cassel.

The tidings of the French Emperor's surrender caused much excitement in Germany. Many hoped that the war would now cease; but this hope was soon shown to be groundless. The German people had made up their minds that the cession of Elsass and German Lorraine should be a condition of peace. The French Government of the National Defence, which displaced the Empire, at once declared that France would give Germany any sum of money, but would not yield an inch of its territory or a stone of its fortresses. Germany, therefore, all but unanimously approved of the continuance of the war. Almost immediately after the battle of Sedan, the armies of the two Crown Princes began their march toward Paris. On September 5, King William entered Rheims, and in a fortnight afterward the Germans were before Paris, the third army occupying the country to the south and southeast, the army of the Maes that to the north and northeast. The Prussian Crown Prince fixed his headquarters in Versailles, where those of King William were also placed, on October 5. Meanwhile two distinct efforts to break through the German lines had

*France  
is still  
obstinate.*

*Siege of  
Paris.*

been made, one by General Ducrot, on September 19, another by General Vinoy, on September 30; but both times the French were driven back. On October 13 and October 21, similar attempts were made, but with a like result. The French were somewhat more successful on October 28, when they took possession of the village of Le Bourget, and began to mass troops there. Two days afterward, after a brave defence, they had to retreat.

*Surrender  
of Metz.*

Meanwhile, a new French army, called the army of the Loire, had been raised and had begun to operate with a view to the relief of Paris; and General Faidherbe had also formed an army in the north. But fresh disasters had befallen France. Strassburg had surrendered on September 27; and on October 27, Marshal Bazaine, after having several times tried to escape from Metz, capitulated with his whole army, which consisted of 173,000 men, with three marshals and 6,000 officers. Metz itself was surrendered to the Germans. The troops which had so long surrounded Metz were then free to prosecute the war which had broken out anew on the field. The first army was placed under General von Manteuffel, and, with the exception of the troops left behind for the occupation of Metz and Lorraine, proceeded in a northwest direction, against Faidherbe. The greater part of the second army marched toward the south, where Prince Frederick Charles was to assume the supreme command. On October 12, General von der Tann had taken possession of Orleans; but on Novem-

ber 8, his troops being enormously outnumbered by the army of the Loire, he retreated. Next day he was hotly attacked, and on the 10th fell back upon Tours. He was joined by the Grand Duke of Mecklenburg, who was sent with troops from Paris to hold the French in check until the second army should come up. The Grand Duke gained some advantages before the arrival of Prince Frederick Charles; but when the latter appeared, the army of the Loire, which had begun its march toward Paris, was driven back at all points, and on December 4, after severe fighting, Orleans was once more occupied by the Germans. The army of the Loire was then broken up into two great divisions, one under General Chanzy, the other commanded by General Bourbaki. The former army was repeatedly defeated, and at length altogether scattered by Prince Frederick Charles; the latter marched toward the east, with a view to effect a diversion by the invasion of South Germany. In the north, Faidherbe displayed great energy; but he was twice defeated in the neighborhood of Amiens; he was overcome also at Bapaume and St. Quentin. A new German army, called the south army, was formed to oppose Bourbaki in the east, and placed under General von Manteuffel, who was succeeded in the north by General von Goeben. For a moment South Germany appeared in real danger from the advance of Bourbaki, for, although he was pursued by General von Manteuffel, the latter was far in the rear. The danger was averted by the cour-

*Further  
French  
disasters.*

*Faidherbe's  
wasted  
energy.*

*Bravery of  
the Baden  
division.*

age of General von Werder, who, with the Baden division, had for some time been holding Generals Cambriel and Garibaldi in check, and who now resolved, at whatever cost, to prevent the further advance of Bourbaki's army. For three days Bourbaki strove, with his large army, at Hericourt, to drive back Werder's small force; but the Baden troops fought with such bravery that the French, on January 17, 1871, were themselves obliged to retreat in disorder. Bourbaki was displaced by General Clinchant; but the latter succeeded no better. Harassed on every side by General von Manteuffel, Clinchant crossed the Swiss frontier with his whole army, consisting of 84,000 men, on February 1.

*German  
desire for  
a closer  
union.*

During the progress of the war the South Germans, proud of the common German name, began to feel how small are the points of difference between themselves and their northern kinsfolk compared with those great interests by which all Germans are united. This feeling gave rise to a desire for a closer union with the Northern Confederation; and in the middle of October, 1870, plenipotentiaries were sent from all the Southern States to Versailles for the purpose of bringing about the desired change. The result of the negotiations was that treaties were signed with Hessen and Baden on November 15; with Bavaria on November 23; and with Württemberg on November 25. By these treaties, which afterward received the approval of the North German Diet and the South German Parliaments, the Northern

Confederation was changed into a German Confederation. This change was accompanied by another of great importance. On December 4, King Ludwig II. of Bavaria proposed to the other German sovereigns, and to the Senates of the three free towns, that the President of the Confederation should receive the title of German Emperor. The proposal being agreed to, King William was, on January 18, 1871, in the Hall of Mirrors in the palace of Versailles, in presence of a brilliant company of German princes and representatives of the army, solemnly proclaimed Emperor in Germany.

*The  
German  
Confedera-  
tion.*

*William  
declared  
Emperor.*

On the following day (the very day on which Faidherbe was defeated at St. Quentin) the French made a last attempt to escape from Paris; but their plans were ill arranged, and they were driven back with heavy loss. The Government of the National Defence, feeling that further resistance was now impossible, opened negotiations with a view to peace. On January 28, Paris formally surrendered; and an armistice for three weeks was concluded, which, however, did not apply to the military operations in the eastern provinces. The preliminaries of peace were signed on February 26 by Count Bismarck and the South German plenipotentiaries on the one hand, and by M.M. Thiers and Favre on the other. According to these, France ceded to the German Empire the province of Elsass (excluding Belfort) and German Lorraine (including Metz and Thionville); and undertook to pay 5,000 millions of francs as an indemnity for

*Peace ne-  
gotiations.*

*The Germans enter Paris.*

the expenses of the war. On March 1, a portion of the German troops entered Paris and occupied a small part of it; but two days afterward they left it, the National Assembly at Bordeaux having already ratified the preliminaries of peace. The German and French plenipotentiaries, who met at Brussels on March 27, for the purpose of concluding a treaty, could not come to an agreement on various points. The delay caused by the misunderstandings, and the troubled state of France, gave rise to an uneasy feeling in Germany. Count Bismarck, therefore, himself interfered, and on May 6 met M. Favre at Frankfurt. Here a treaty was formally signed on the 10th; and it was afterward ratified by the German and French Governments. The treaty of Frankfurt differed only in details from the preliminaries which had before been concluded. The district round Belfort was yielded to the French; but in return the latter ceded some additional territory in Lorraine.

*Peace of Frankfurt.*

*Feeling of the Germans as to the war.*

The German people were displeased that France was allowed to keep Belfort; but on the whole they regarded the results of the war with pride and pleasure. The ancient military fame of Germany had been more than maintained; the Fatherland had been united; and the national sentiment was gratified by the conquest of the long-lost provinces of Elsass and Lorraine, which would henceforth form a defence against French attacks. The Austro-Prussian war had raised Prussia to the first place



in Germany; the present war raised Germany to the first place in Europe.

[In 1871, a Republic is proclaimed in France, as the Comte de Chambord refuses to renounce the white flag; the Commune breaks out in Paris and is suppressed by MacMahon, after great incendiarism and excesses. The seat of Italian Government is transferred from Florence to Rome. The Tweed ring of New York is broken up. Holland cedes her Gold Coast settlements to England. The Mont Cenis tunnel is opened. Livingstone discovers the Upper Congo. The English Universities abolish the Religious test. English trade-unions are legalized. In 1872, the ballot is introduced. The Geneva Court of Arbitration awards \$15,000,000 damages to the United States for the depredations by the *Alabama* and other ships. In 1873, the last instalment of indemnity is paid and the German troops evacuate France; general conscription is introduced. In Spain, the King resigns, and a Republic is proclaimed. Castelar becomes dictator; Carlists revolt in the north, Federalists and Communists in the south. The treaty of Zanzibar forbids the Slave Trade in Africa. In 1874, the troubles in Spain are concluded by the proclamation of Alfonso, son of Isabella, as King. The British conclude a war with Ashanti by the capture of Coomassie. In 1875, a controlling interest in the Suez Canal is bought by Disraeli. France adopts a new constitution, with a President for seven years.

*France a Republic.*

*The Geneva award.*

*England controls the Suez Canal.*

**THE WORLD'S GREAT EVENTS**    A.D. 1870-1871

*Universal  
Postal  
Union.*

Bosnia and Herzegovina revolt against Turkey. Stanley circumnavigates Victoria Nyanza and Tanganyika. The Universal Postal Union is instituted. Plimsoll carries the Merchant Shipping Bill. In 1876, the Carlist War ends. Christian Science is founded by Mrs. Mary Baker Eddy. The telephone is invented by Alexander Graham Bell.

# THE HISTORY AND DEVELOPMENT OF THE TELEPHONE

(A.D. 1876)

SIR OLIVER LODGE

THE majority of mankind deal with material objects, and seldom are concerned with electricity and magnetism, except in the form of completed apparatus designed and constructed for practical use. Their only touch with the ether is through the eye, and that again only tells us about the material objects which have either emitted or scattered the light. Light primarily tells us nothing about itself, nothing about its electromagnetic constitution, and still less about the ether which conveys it.

With matter we are at home, for our bodies are composed of it, while everything about electricity and magnetism has to be inferred from their effects on matter. An electric current can be appreciated as heat, or as the deflection of a galvanometer needle, or as an unpleasant shock. Mankind's first acquaintance with electricity was in the thunderstorm. We only learned about magnetism because

*Man's first  
knowledge  
of  
electricity*

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*Study of  
electrical  
phenomena.*

the earth happened to be a magnet. For generations even civilized man knew nothing about these etherial manifestations, and only began to make serious metrical experiments on them in the 19th century. Those phenomena still feel rather aloof from practical life, though it is true that in the 20th century their applications have become numerous. Consequently, when the serious study of electrical phenomena was begun, discoveries were made in a fast and furious manner, and anyone who worked with even simple apparatus of that novel kind might hit upon something new to science.

*Bell's  
interest  
in precise  
and clear  
human  
speech.*

The articulating telephone is an instrument of absurd simplicity. It was invented by one who was no professed electrician, who was not really learned in physical science, but was interested mainly in introducing precision and clear intelligibility into human speech. Most of us, in talking, slur over words in a careless and incomplete and barely intelligible manner. Clear utterance was never the strong point of the pulpit, though it used to be prevalent on the stage. Even that can hardly be said now: actors are liable to say their parts in a manner which cannot be followed by a foreigner or by the partially deaf; they talk in what is considered a natural way, the way that people talk in ordinary life, a way which is not really admirable.

Graham Bell's own articulation was of the most precise character; his manner of speech was a specially noticeable feature of his lectures, when he came over to England in the year 1877, and excited the admiration of us early mem-

bers of the Physical Society by his clear enunciation. He had been concerned with the training of the deaf and dumb; he had married, so I understood, a deaf and dumb wife; and had devoted himself to the accurate production of human speech, whether by his own lips and larynx or through its reproduction by instrumental means. He once said, so I am told, that it was fortunate that he was not a scientifically trained physicist; for if he had been he would probably have known (or thought he knew) that an articulating machine of a simple character was an impossibility.

*Concerned  
with  
training  
the deaf  
and dumb.*

The instruments he had primarily and essentially to deal with were the human voice at one end and the human ear at the other; and he realized that if one of these was defective the other must be made still more precise and accurate. Thus the telephone arose from a study of articulation. This study he must have inherited from his father, Alexander Melville Bell, the author of a book called "Visible Speech," and other works relating to pronunciation, whose whole life had been employed in teaching people to speak. Clerk Maxwell amusingly said:

*Study of  
articulation.*

"He brought the art to such perfection that, though a Scotchman, he taught himself in six months to speak English, and I regret extremely that when I had the opportunity in Edinburgh I did not take lessons from him."

*Work of  
Alexander  
Melville  
Bell.*

Mr. Melville Bell had made a complete analysis and classification of all the sounds capable of being uttered by

*Graham  
Bell's  
early  
training.*

the human voice, from the Zulu "clicks" to coughing and sneezing, and had embodied his results in a system of symbols, not alphabetical symbols, but founded on the different configurations of the organs of speech; and a test made by Mr. Alexander J. Ellis, author of "The Essentials of Phonetics," demonstrated the value of Melville Bell's system. His son, inventor of the telephone, was thus prepared by early training in the practical analysis of the elements of speech, and applied his father's system in the Boston School for the Deaf and Dumb, where the results were so successful that, as Clerk Maxwell says, they were not only the most valuable testimonial to his father's system, but an honour which the inventor of the telephone may well consider as the highest he has attained.

*Complicated  
talking  
machines.*

Talking machines had been invented before, but they were fearfully complicated—special arrangements for producing vowel sounds (which in our own day have been developed so successfully by Sir Richard Paget); other devices for the explosive noises of consonants; escape of air for sibilants; a toothed wheel for the rolling r's; and so on. By skilled manipulation of a keyboard it was thus possible to make a rough imitation of speech and to utter a few sentences.

Graham Bell's instrument did not aim at thus producing speech *de novo*. It took the sounds emanating from the human voice, and sought to reproduce them at a distance by electrical means; so that at any, even great, distances, aerial vibrations could be reproduced and interpreted by

the human ear, after the same fashion as the original aerial vibrations could be interpreted by an ear close by. The way in which he ultimately found that this could be accomplished was of surpassing and surprising simplicity; and if asked suddenly what was the simplest and greatest invention of the 19th century I should be disposed to say the telephone, for it has not only had its wide effect on extending human intercourse, it has put into the hands of experimenters an instrument of great value. It has revolutionized the detection of minute currents in all manner of sciences; it has made measurements easy which without it would be difficult; in many cases it has superseded the eye as an observing instrument; and now in the present century, supplemented by further discoveries, it bids fair to make wireless telephony possible all over the earth, with international results which can only dimly be foreseen.

*Simplicity  
of Bell's  
instrument.*

*Wide effect  
of the  
telephone.*

It must never be forgotten that the real wonder of this mode of communication between mind and mind lies in the larynx and its associated cavities at the sending end, and in the ear and brain at the receiving end. The thought of an agent A is understood by a percipient P, through a mechanical system of vibration to which we have grown so accustomed that we are liable to forget its marvelous character. By delicate muscular adjustments the air is thrown into vibrations corresponding to the thought in the mind. Those vibrations are received and analysed by the complicated mechanism of the ear; their effects are

*Mechanical  
system  
of  
vibration.*

somewhat mysteriously conveyed by the auditory nerve to the brain, and there are still more mysteriously interpreted by the mind of the percipient; so that if he knows the code called language (and unfortunately mankind has invented far too many of such codes) he can become aware of the thought originally in the mind of the agent or communicator.

*Method  
of sound  
trans-  
mission.*

Transmission is thus under ordinary circumstances a purely mechanical operation, involving brain-cell, nerve, muscle, vibrating tissue, condensations and rarefactions of the air; then again a vibrating membrane, bones, liquid, nerve endings, with discriminating arrangements for analysing a great range of frequency for notes of different pitch; then nerve again, brain-cell, and so to the perceiving mind, where all this mechanical and physiological disturbance is reinterpreted as thought. The only difference between this ordinary case of conversation, and the modern method of communication across great tracts of space, is that intervening electrical or etherial machinery is employed to effect the transmission over a hundred or a thousand miles of distance in a rapid and almost instantaneous manner. This is done by making the air vibrations either generate or modify an electric current, that is to throw docile and responsive electrons into a corresponding state of motion; the electric impulses being then either broadcast into space, or else guided by a wire to their destination; where, by aid of the magnetic effect of the moving electrons, which again take up the vibrations,



an iron plate, itself full of magnetic whirls, is acted on and made to vibrate in a corresponding manner; thus once more producing condensations and rarefactions in the air in contact with that plate; and so ultimately reach the diaphragm of the receiving ear. No sound is transmitted between the two stations, only electric impulses, which travel through the ether with the speed of light, no matter whether they are guided by a wire or not.

*Electric  
impulses.*

The remarkable novelty in this long-distance transmission method is not so much that the ether is able to pick up and transmit the pulses, by aid of the ingenious mechanism provided; the ether is so docile that it will nearly always do all that is wanted of it, except display and enforce its own existence. The wonder is that a simple iron plate is able thus magnetically to be so affected that it can reproduce and follow accurately, not only the intonations of the human voice, but the sound from every instrument in an orchestra, in a perfect and detailed manner, so that the ideas of Bach and Beethoven in their fullness and entirety can be taken up, at least on the mechanical side, by such a plate, and given to any hearer whose mind is attuned to the reception of the delights of refined musical composition.

*A simple  
iron plate  
reproduces  
human  
voice or  
orchestra.*

This was essentially the surprising discovery of Graham Bell. Crude sounds had been transmitted electrically, before, by Philipp Reis and others. Wheatstone had transmitted the sounds of a musical instrument through a wooden rod to a distant soundboard—an easy and inter-

esting thing to do. But Bell found how to make the vibrations of an iron plate at one end generate fluctuating electric currents which should cause an iron plate at the far end to vibrate in a precisely similar manner, and thus invented the articulating telephone.

*Enthusiasm  
of Lord  
Kelvin.*

Those, now comparatively few, who have lived through the '70's of last century, vividly remember the surprise which the simplicity of the apparatus capable of achieving so far reaching a result aroused when it was first announced. I remember, for instance, the enthusiasm with which Lord Kelvin, after a visit to America, came back to the British Association Meeting in Glasgow, bringing with him a couple of Bell's early instruments, which the inventor had given him, and which he enthusiastically showed to Section A, then meeting in his own lecture theatre, and described his astonishment when he heard a clock-spring actually talk. He had heard it say—a misquotation—"To be or not to be, there's the rub." This early demonstration by Lord Kelvin in this country, under our system of Patent Laws, threatened at one time to have a serious and quite undesired effect in preventing the completion of Bell's patent; a strange anomaly, as I think. But fortunately Lord Kelvin was able to exert his influence; and sensible judicial people found themselves able to evade the technical point and grant the inventor his just right.

*Bell's  
patent.*

The instruments shown by Lord Kelvin were of the simplest character; the sending end and the receiving end

were much the same. At one end mechanical vibration generated a current; at the other end that current magnetically reproduced mechanical vibration; that was the whole thing. No energy was put into the circuit, except what the voice put into it, in those early days. Very soon afterwards an Edison carbon transmitter and a Hughes microphone, consisting of granulated carbon in the circuit of a battery, were introduced, so that the voice merely altered the resistance of the carbon granules; the energy came from the battery, and by that means it was possible to magnify the voice, and transmit to a distance any reasonable amount of fluctuating energy. But this microphonic transmitter, still in use at the present day, though it slightly differentiated the apparatus at the sending and receiving ends, did not really complicate matters much: the essential apparatus remained quite simple. There are plenty of complications now; but those complications have to do with the distribution of the messages and the selection of the person talked to. It is obviously no easy matter to enable any one person in the British Isles to communicate with any other by a system of wires; of which each subscriber to the telephone exchange need only have a single pair. A further complication arises when the calling-up is attempted to be done mechanically or automatically, without human intervention, at the central station.

*Early  
telephone  
instruments.*

*Later  
complica-  
tions.*

These complications have called for the utmost ingenuity and skill on the part of those engineers who have been

*Need for an  
invention  
to be  
foolproof.*

engaged in carrying it out. Whenever an invention or a discovery gets into extensive practical use, on the large scale, innumerable difficulties are always encountered, and are nearly always successfully overcome by those who devote their life to the work. To understand these things involves a long apprenticeship, a long period of study with the actual apparatus. For in practical use a device has to be made foolproof, able to be worked by operators with no special skill, and by subscribers who doubtless manage to pick out every weak point and make the thing go wrong if any loophole for misuse is left them. Furthermore, any wide scale application of engineering invention and discovery is open to perturbations of a quite different kind from any which are studied in physics. Operators may strike, peaceful progress may be interrupted by wars of one kind or another; all which complications, if they belong to science at all, belong not to physics or engineering, but, I suppose, to the science of sociology. Human free will is a great asset, but, like everything else of value, it is capable of abuse—sometimes, strangely enough, even when actuated by class-loyalty and other excellent motives.

*Early  
skepticism  
concerning  
the  
telephone.*

To return to the early history of the telephone. It was received in this country by some men of science with a certain amount of skepticism, which is only instructive now as showing its novelty. That great chemist, Prof. A. W. Williamson, for instance, was very doubtful whether the messages were really transmitted by electrical means at all; he thought it more probable that the sound actually

travelled between the two places by the wire; and he urged me as a young man to look into it and see whether there was not some hocus-pocus in it.

Lord Kelvin, however, as we have seen, received it with enthusiasm, and was able as a mathematical physicist to realize and state the theory of the means by which electrical transmission was really accomplished; though naturally in his lifetime he was not acquainted with the wireless or radio methods now in vogue, made possible by Fleming's introduction of the valve detector, based on a stray observation of Edison's of the unilateral conductivity of electrodes in a vacuum, akin to the unilateral conductivity of a modified coherer or crystal detector. . . .

*Wireless  
and radio  
methods.*

I suppose it may be said that the articulating telephone was born on the 10th March, 1876. Up to that time Bell had been working at telegraphic communication, using tuning forks and Morse signals. He was Professor of Vocal Physiology at Boston University. We are told that during his experiments one of the transmitter springs got out of order and made a faint sound in the receiver. He had hoped till then to get the deaf to interpret musical sounds transmitted by what he called "the harmonic telegraph," making a kind of modified and rapid Morse-code system. He thought that if they could not hear, they could see, the signals which were being transmitted, and gradually become able to interpret them; just as they were able to interpret his father's system of visible speech or lip-reading. The accidental observation, however, gave him another

*Articulating  
telephone  
born on  
March 10,  
1876.*

*First  
telephone  
message.*

clue; and though at first he only got his receiver to make strange and discordant noises, on the 10th March, 1876, his efforts were crowned with success. On this memorable day Bell spoke into an instrument fixed in an attic, to his assistant in the basement, at the other end of 100 feet of wire. All he said was, "Mr. Watson, come here. I want you!" The assistant rushed upstairs into the attic, shouting excitedly, "I heard you; I could hear what you said!" This is the story of the birth of the telephone, as told by Bell himself.

*Exhibition  
in  
Philadelphia.*

A writer in the *Wireless World* of the 26th May this year goes on to say that, at an Exhibition held in Philadelphia later in 1876, the Emperor of Brazil placed the receiver to his ear and was astonished to hear it speak. Lord Kelvin was there too, and declared, as he listened to the steel spring or diaphragm, which at that time he was told to press against his ear, so as to get the necessary damping—"It does speak! It is the most wonderful thing I have seen in America!"

Now that a telephone is to be found in most households (though not indeed so many in this country as in others, for in America there seems to be a telephone in nearly every room), and now that the younger generation is so accustomed to it that they can hardly imagine a time when it was not in existence, it is well to remember the surprise and delight with which the invention was received. In these days, indeed, it is occasionally customary to regard the telephone as rather a nuisance. I found it so when I

was in America in 1920; at any time, day or night, I might be called up by reporters and others. It was very little use to tell the hotel clerk not to switch people on—they got through any ordinary barriers; and, when too much bored, my plan was to turn the receiver on to the transmitter and let the communicator talk back to himself, instead of to me! This usually had the desired effect, and was better than Herbert Spencer's device of stuffing his ears with cotton wool when he was bored by a conversation! The writer in the *Wireless World* says that it is amusing to find that towards the close of his life Graham Bell himself sometimes found the telephone such a source of annoyance that he had it removed from his room. I do not vouch for that; but it seems quite possible, at any rate in certain moods.

*The  
telephone  
a source of  
annoyance.*

[In 1876, Bulgaria revolts against Turkey and is treated with barbarous cruelty. Servia and Montenegro declare war on the Sultan and are aided by Russian volunteers. France and England establish the Dual Control in Egypt. In 1877, Russian troops invade Turkey; Rumania aids Russia; the Turks hold Plevna, where they are besieged for nearly five months before surrendering. Kars in Asia Minor is stormed by the Russians. Great Britain annexes the South African Republic and Queen Victoria is proclaimed Empress of India. In 1878, Turkey signs the Treaty of San Stefano with Russia. Great Britain refuses to recognize the treaty and demands a European Con-

*Victoria  
proclaimed  
Empress  
of India.*

gress, which convenes at Berlin in July and is attended by representatives of Great Britain, Austria-Hungary, Germany, France, Italy, Russia and Turkey. Afghanistan is invaded by General Roberts after the Ameer receives a Russian mission but refuses to admit English agencies into the country. Electric lighting is introduced. David Hughes discovers the microphone.]

*Electric  
lighting is  
introduced.*



## THE CONGRESS OF BERLIN

(A.D. 1878)

JUSTIN MCCARTHY

THE common expectation was soon fulfilled. At the close of June, 1876, Serbia and Montenegro declared war against Turkey. Serbia's struggle was short. At the beginning of September the struggle was over, and Serbia was practically at Turkey's feet. The hardy Montenegrin mountaineers held their own stoutly against the Turks everywhere, but they could not seriously influence the fortunes of a war. Russia intervened and insisted upon an armistice, and her demand was acceded to by Turkey. Meanwhile, the general feeling in England on both sides was growing stronger and stronger. Public meetings of Mr. Gladstone's supporters were held all over the country, and the English Government was urged in the most emphatic manner to bring some strong influence to bear on Turkey. On the other hand, it can not be doubted that the common suspicion of Russia's designs began to grow more keen and wakeful than ever. Lord Derby frankly

*Serbia and  
Montene-  
gro declare  
war against  
Turkey.*

*Lord Derby  
proposes a  
conference  
of the  
European  
Powers.*

made known to the Emperor Alexander what was thought or feared in England, and the Emperor replied by pledging his sacred word that he had no intention of occupying Constantinople, and that if he were compelled by events to occupy any part of Bulgaria, it should be only provisionally, and until the safety of the Christians should be secured. Then Lord Derby proposed that a conference of the European Powers should be held at Constantinople in order to agree upon some scheme which should provide at once for the proper government of the various provinces and populations subject to Turkey, and at the same time for the maintenance of the independence and integrity of the Ottoman Empire. The proposal was accepted by all the Great Powers, and on November 8, 1876, it was announced that Lord Salisbury and Sir Henry Elliott, the English Ambassador at Constantinople, were to attend as the representatives of England.

*Lord Beaconsfield  
denounces  
Russia.*

Lord Beaconsfield was apparently determined to recover the popularity that had been somewhat impaired by his unlucky way of dealing with the massacres of Bulgaria. His plan now was to go boldly in for denunciation of Russia. He sometimes talked of Russia as he might of an enemy who had already declared war against England. The prospects of a peaceful settlement of the European controversy seemed to become heavily overclouded. Lord Beaconsfield appeared to be holding the dogs of war by the collar, and only waiting for the

convenient moment to let them slip. Every one knew that some of his colleagues, Lord Derby, for example, and Lord Carnarvon, were opposed to any thought of war, and felt almost as strongly for the Christian provinces of Turkey as Mr. Gladstone did. But people shook their heads doubtfully when it was asked whether Lord Derby or Lord Carnarvon, or both combined, could prevail in strength of will against Lord Beaconsfield.

The conference at Constantinople came to nothing. The Turkish statesmen at first attempted to put off the diplomatists of the West by the announcement that the Sultan had granted a Constitution to Turkey, and that there was to be a Parliament, at which representatives of all provinces were to speak for themselves. There was, in fact, a Turkish Parliament called together. Of course, the Western statesmen could not be put off by an announcement of this kind. They knew well enough what a Turkish Parliament must mean. It seems almost superfluous to say that the Turkish Parliament was ordered to disappear very soon after the occasion passed away for trying to deceive the Great European Powers. Evidently Turkey had got it into her head that the English Government would at the last moment stand by her, and would not permit her to be coerced. She refused to come to terms, and the Conference broke up without having accomplished any good. New attempts at arrangement were made between England, Russia, and others of the Great Powers, but they fell through. Then

*Failure of  
the Con-  
stantinople  
conference.*

*Turkey  
refuses  
to come  
to terms.*

*Russia  
declares  
war against  
Turkey.*

at last, on April 24, 1877, Russia declared war against Turkey, and on June 27 a Russian army crossed the Danube and moved toward the Balkans, meeting with comparatively little resistance, while at the same time another Russian force invaded Asia Minor.

*Osman  
Pasha at  
Plevna.*

For a while the Russians seemed likely to carry all before them. But they had made the one great mistake of altogether undervaluing their enemies. Their preparations were hasty and imperfect. The Turks turned upon them unexpectedly and made a gallant and almost desperate resistance. One of their commanders, Osman Pasha, suddenly threw up defensive works at Plevna, in Bulgaria, a point the Russians had neglected to secure, and maintained himself there, repulsing the Russians many times with great slaughter. For a while success seemed altogether on the side of the Turks, and many people in England were convinced that the Russian enterprise was already an entire failure; that nothing remained for the armies of the Czar but retreat, disaster, and disgrace. Under the directing skill, however, of General Todleben, the great soldier whose splendid defence of Sebastopol had made the one grand military reputation of the Crimean War, the fortunes of the campaign again turned. Kars was taken by assault on November 18, 1877; Plevna surrendered on December 10. At the opening of 1878 the Turks were completely prostrate. The road to Constantinople was clear. Before the English public had time to recover their breath and to observe

*Victories  
of the  
Russian  
army.*

what was taking place, the victorious armies of Russia were almost within sight of the minarets of Stamboul.

Meanwhile, the English Government were taking momentous action. In the first days of 1878 Sir Henry Elliott, who had been Ambassador in Constantinople, was transferred to Vienna, and Mr. Layard, who had been Minister at Madrid, was sent to the Turkish capital to represent England there. Mr. Layard was known to be a strong believer in Turkey; more Turkish in some respects than the Turks themselves. But he was a man of superabundant energy; of what might be described as boisterous energy. The Ottoman Government could not but accept his appointment as a new and stronger proof that the English Government were determined to stand their friend; but they ought to have accepted it, too, as evidence that the English Government were determined to use some pressure to make them amenable to reason. Unfortunately it would appear that the Sultan's Government accepted Mr. Layard's appointment in the one sense only and not in the other. Parliament was called together at least a fortnight before the time usual during recent years. The Speech from the Throne announced that Her Majesty could not conceal from herself that, should the hostilities between Russia and Turkey unfortunately be prolonged, "some unexpected occurrence may render it incumbent on me to adopt measures of precaution." This looked ominous to those who wished for peace, and it raised the spirits of the

*Mr. Layard  
appointed  
British  
Ambas-  
sador to  
Turkey.*

*English  
War Party.*

War Party. There was a very large and a very noisy war party already in existence. It was particularly strong in London. It embraced some Liberals as well as nearly all Tories. It was popular in the music-halls and the public-houses of London. The men of action got a nickname. A poet of the music-halls had composed a ballad which was sung at one of these caves of harmony every night amid the tumultuous applause of excited patriots. The refrain of this war-song contained the spirit-stirring words:—

“We don’t want to fight, but, by Jingo, if we do,  
We’ve got the ships, we’ve got the men, we’ve  
got the money, too.”

*Origin of  
the word  
“Jingo.”*

Some one whose pulses this lyrical outburst of national pride failed to stir called the party of its enthusiasts Jingo. The name was caught up at once, and the party was universally known as the Jingo. The term, applied as one of ridicule and reproach, was adopted by chivalrous Jingo as a name of pride.

The Government ordered the Mediterranean fleet to pass the Dardanelles and go up to Constantinople. The Chancellor of the Exchequer announced that he would ask for a supplementary estimate of six millions for naval and military purposes. Thereupon Lord Carnarvon, the Colonial Secretary, at once resigned. He had been anxious to get out of the Ministry before, but Lord Beaconsfield induced him to remain. He disapproved

now so strongly of the despatch of the fleet to Constantinople and the supplementary vote that he would not any longer defer his resignation. Lord Derby was also anxious to resign, and indeed tendered his resignation, but he was prevailed upon to withdraw it. The fleet meanwhile was ordered back from the Dardanelles to Besika Bay. It had got as far as the opening of the Straits when it was recalled. The Liberal Opposition in the House of Commons kept on protesting against the various war measures of the Government, but with little effect. While all this agitation in and out of Parliament was going on, the news came that the Turks, utterly broken down, had been compelled to sign an armistice, and an agreement containing a basis of peace, at Adrianople. Then, following quickly on the heels of this announcement, came a report that the Russians, notwithstanding the armistice, were pushing on toward Constantinople with the intention of occupying the Turkish capital. A cry of alarm and indignation broke out in London. If the clamor of the streets at that moment had been the voice of England, nothing could have prevented a declaration of war against Russia. Happily, however, it was proved that the rumor of Russian advance was unfounded. The fleet was now sent in good earnest through the Dardanelles, and anchored a few miles below Constantinople. Russia at first protested that if the English fleet passed the Straits Russian troops ought to occupy the city. Lord Derby was firm, and terms of

*English  
fleet ordered to  
Constantinople.*

*The Turks  
sign an  
armistice.*

*War fever  
in London.*

arrangement were found—English troops were not to be disembarked and the Russians were not to advance. Russia was still open to negotiation.

*The Treaty  
of San  
Stefano.*

Probably Russia had no idea of taking on herself the tremendous responsibility of an occupation of Constantinople. She had entered into a treaty with Turkey, the famous Treaty of San Stefano, which secured for the populations of the Christian provinces almost complete independence of Turkey, and was to create a great new Bulgarian State with a seaport on the Aegean Sea. The English Government refused to recognize this treaty. Russia offered to submit the treaty to the perusal, if we may use the expression, of a Congress; but argued that the stipulations which merely concerned Turkey and herself were for Turkey and herself to settle between them. This was obviously an untenable position. It is out of the question to suppose that, as long as European policy is conducted on its present principles, the Great Powers of the West could consent to allow Russia to force on Turkey any terms she might think proper. Turkey meanwhile kept feebly moaning that she had been coerced into signing the treaty. The Government determined to call in the Reserves, to summon a contingent of Indian troops to Europe, to occupy Cyprus, and to make an armed landing on the coast of Syria. All these resolves were not, however, made known at the time.

Every one felt sure that something important was



going on, and public expectancy was strained to the full. On March 28, 1878, Lord Derby announced his resignation. Measures, he said, had been resolved upon of which he could not approve. He did not give any explanation of the measures to which he objected. Lord Beaconsfield spoke a few words of good feeling and good taste after Lord Derby's announcement. He had hoped, he said, that Lord Derby would soon come to occupy the place of Prime Minister which he now held; he dwelt upon their long friendship. Not much was said on either side of what the Government were doing. The last hope of the Peace Party seemed to have vanished when Lord Derby left his office.

*Lord Derby  
resigns.*

Lord Salisbury was made Foreign Minister. He was succeeded in the Indian Office by Mr. Gathorne Hardy, now created Lord Cranbrook. Colonel Stanley, brother of Lord Derby, took the office of Minister of War in Lord Cranbrook's place. Sir Michael Hicks-Beach had already become Secretary of the Colonies on the resignation of Lord Carnarvon. The post of Irish Secretary had been given to Mr. James Lowther. Lord Salisbury issued a circular in which he declared that it would be impossible for England to enter a Congress which was not free to consider the whole of the provisions of the Treaty of San Stefano. The very day after Parliament had adjourned for the Easter recess, the Indian Government received orders to send certain of their troops to Malta. This was a complete surprise to the country. It was made

*Changes in  
the British  
ministry.*

*Indian  
troops  
ordered  
to Malta.*

the occasion for a very serious controversy on a grave constitutional question in both Houses of Parliament. The Opposition contended that the constitutional principle which left it for Parliament to fix the number of soldiers the Crown might maintain in England was reduced to nothingness if the Prime Minister could at any moment, without even consulting Parliament, draw what reinforcements he thought fit from the almost limitless resources of India. The majority of those supporting Lord Beaconsfield were not, however, much disposed to care about argument. They were willing to approve of any step Lord Beaconsfield might think fit to take.

*Bismarck  
plans a  
Congress  
at Berlin.*

Prince Bismarck had often during these events shown an inclination to exhibit himself in the new attitude of a peaceful mediator. He now interposed again, and issued invitations for a Congress to be held in Berlin to discuss the whole contents of the Treaty of San Stefano. After some delay, discussion, and altercation, Russia agreed to accept the invitation on the conditions proposed, and it was finally resolved that a Congress should assemble in Berlin on the approaching June 13. Much to the surprise of the public, Lord Beaconsfield announced that he himself would attend, accompanied by Lord Salisbury, and conduct the negotiations in Berlin. The event was, we believe, without precedent. Never before had an English Prime Minister left the country while Parliament was sitting to act as the representative

of England in a foreign capital. The part he had undertaken to play suited Lord Beaconsfield's love for the picturesque and the theatrical. His journey to Berlin was a sort of triumphal progress. At every great city, almost at every railway station, as he passed, crowds turned out, drawn partly by curiosity, partly by admiration, to see the English statesman whose strange and varied career had so long excited the wondering attention of Europe. Prince Bismarck presided at the Congress, and, it is said, departed from the usual custom of diplomatic assemblages by opening the proceedings in English. The use of our language was understood to be a kindly and somewhat patronizing deference to the English Prime Minister, whose knowledge of spoken French was supposed to have fallen rather into decay of late years. The Congress discussed the whole, or nearly the whole, of the questions opened up by the recent war. Greece claimed to be heard there, and after some delay and some difficulty was allowed to plead her own cause.

*Lord Beaconsfield's triumphal journey to Berlin.*

The Treaty of Berlin recognized the complete independence of Roumania, of Servia, and of Montenegro, subject only to certain stipulations with regard to religious equality in each of these States. To Montenegro it gave a seaport and a slip of territory attaching to it. Thus one object of the mountaineers was accomplished. They were able to reach the sea. The treaty created, north of the Balkans, a State of Bulgaria: a much smaller Bulgaria than that sketched in the Treaty of San

*The Treaty of Berlin.*

*Eastern  
Roumelia  
created.*

Stefano. Bulgaria was to be a self-governing State tributary to the Sultan and owning his suzerainty, but in other respects practically independent. It was to be governed by a Prince whom the population were to elect with the assent of the Great Powers and the confirmation of the Sultan. It was stipulated that no member of any reigning dynasty of the Great European Powers should be eligible as a candidate. South of the Balkans, the treaty created another and a different kind of State, under the name of Eastern Roumelia. That State was to remain under the direct political and military authority of the Sultan, but it was to have, as to its interior condition, a sort of "administrative autonomy," as the favorite diplomatic phrase then was. East Roumelia was to be ruled by a Christian Governor, and there was a stipulation that the Sultan should not employ any irregular troops, such as the Circassians and the Bashi-Bazouks, in the garrisons of the frontier. The European Powers were to arrange in concert with the Porte for the organization of this new State. As regarded Greece, it was arranged that the Sultan and the King of the Hellenes were to come to some understanding for the modification of the Greek frontier and that if they could not arrange this between themselves, the Great Powers were to have the right of offering, that is to say, in plain words, of insisting on, their mediation. Bosnia and the Herzegovina were to be occupied and administered by Austria. Roumania undertook, or, in other words, was compelled to under-

take, to return to Russia that portion of Bessarabian territory which had been detached from Russia by the Treaty of Paris. Roumania was to receive in compensation some islands forming the Delta of the Danube, and a portion of the Dobrudscha. As regarded Asia, the Porte was to cede to Russia, Ardahan, Kars, and Batoum, with its great port on the Black Sea.

The Treaty of Berlin gave rise to keen and adverse criticism. Very bitter indeed was the controversy provoked by the surrender to Russia of the Bessarabian territory taken from her at the time of the Crimean War. Russia had regained everything which she had been compelled to sacrifice at the close of the Crimean War. The Black Sea was open to her war vessels, and its shores to her arsenals. The last slight trace of Crimean humiliation was effaced in the restoration of the territory of Bessarabia. Profound disappointment was caused among many European populations, as well as among the Greeks themselves, by the arrangements for the rectification of the Greek frontier.

*Adverse criticism.*

*Russia's gains.*

Thus, speaking roughly, it may be said that the effect of the Congress of Berlin on the mind of Europe was to make the Christian populations of the southeast believe that their friend was Russia and their enemies were England and Turkey; to make the Greeks believe that France was their especial friend, and that England was their enemy; and to create an uncomfortable impression everywhere that the whole Congress was a prearranged

business, a transaction with a foregone conclusion, a dramatic performance carefully rehearsed before in all its details and merely enacted as a pageant on the Berlin stage.

*President  
Garfield is  
murdered.*

*Panama  
Canal is  
begun.*

In 1879, Davitt forms the Irish Land League. Belgium sends Stanley to found the Congo Free State. In 1880, the Boer War breaks out. Cologne Cathedral, begun in the Thirteenth Century, is finally completed. In 1881, the Czar Alexander II is murdered. Turkey is forced to cede most of Thessaly and command of the Gulf of Arta to Greece. President Garfield is murdered. The Boers defeat the British and the Transvaal recovers self-government. The French gain control of Tunis. In 1882, the Primrose League is founded in England. Lord Cavendish, Chief Secretary for Ireland, and Thomas Burke, the Undersecretary, are murdered in Phoenix Park, Dublin. The Panama Canal is begun. Arabi Pasha rouses the Egyptians against foreign influence. The English fleet bombards Alexandria; an army is landed, and the Egyptian rebels are dispersed at Tel-el-Kebir. Arabi is banished to Ceylon; a British army of occupation remains. Italy acquires the port of Assab and adjacent territory on the Red Sea, which is the start of a colonial empire. In 1883, a Civil Service Act introduces competitive examinations into the United States Government service. The French go to war with Madagascar. They also declare a protectorate over Annam and Tonkin, in Indo-China. Maxim invents an automatic machine gun. In 1885, Eastern Roumelia revolts from Turkey and joins Bulgaria. Servia invades Bulgaria but is driven back. Great Britain conquers Burma and declares

a protectorate over southern New Guinea. Pasteur discovers a cure for hydrophobia. Italy occupies Massawa, Egypt. In 1886, King Ludwig of Bavaria commits suicide. Russia fortifies Batum in defiance of treaties. Alexander of Bulgaria is kidnapped by Russians. He is restored and resigns. The Canadian Pacific Railway is completed. Great Britain and Germany define their spheres of influence in the Western Pacific. In 1887, Ferdinand of Coburg succeeds Alexander in Bulgaria. Stanley discovers the Albert Edward Nyanza. In 1888, the British East Africa Company is formed. The Lick Observatory in California begins work. In 1889, Menelik becomes Emperor of Abyssinia and signs a treaty placing the empire under Italian dominion. The Panama Canal becomes bankrupt. The Crown Prince of Austria commits suicide. King Milan of Serbia abdicates in favor of his son, Alexander. Brazil becomes a Republic. The British South Africa Company receives a charter. The Eiffel Tower is built. Japan sets up constitutional government. In 1890, England cedes Heligoland to Germany. Italy founds the Colony of Eritrea. Germany, England and France agree on their African boundaries. The French capture Timbuktu. The first May Day celebration of Labor is held. In 1891, the Siberian railway is begun.

*Pasteur's  
cure for  
hydro-  
phobia.*

*Brazil a  
Republic.*





# THE GREAT SIBERIAN RAILWAY

(A.D. 1891)

JOHN GEDDIE

IN May, 1705, Peter the Great founded his new capital, thereby breaking out, through the channel of the Neva, "a window into Europe." In the same month, in 1891, the present Emperor, Nicholas II., then Czarewitch, cut the first sod of the greatest of Russia's engineering undertakings, the Trans-Siberian Railway, at Vladivostok, the "Golden Gate" of the East. If official calculations hold good, the vast work will be complete, from end to end, in the course of the summer of 1905, and the traveller will then be able to journey by rail, in a fortnight, from the shores of the Baltic to those of the Gulf of Tartary.

*The first  
sod cut,  
1891.*

Russians believe in auspicious anniversaries; and there will probably be an effort to make the opening of the railway across Siberia coincide with the second centenary of the founding of St. Petersburg. The one event is the complement of the other. What Russia needed most two centuries ago was light. What she now chiefly strives after is space. If it was necessary, in 1705, to open a

*Russia's  
need of  
light and  
space.*

front window into the Baltic, it will be felt not less urgent in 1905 to open a back door into the Pacific.

The ruling powers of Russia would perhaps have been glad, on several grounds, to have postponed for some time longer the task of taking up and pressing forward to completion a project that has been before their minds ever since the Crimean War, if not earlier. Economically and financially, Russia is not yet in the most advantageous position for tackling an enterprise so stupendous. Even if the estimates of cost are not exceeded, it will be for long a heavy drain on the resources of a country which has not much to spare for commercial adventures beyond the Urals. It will hamper and impede the progress, none too rapid, of internal reforms. But there were considerations that imperatively demanded that the work should be taken in hand without delay; and these were at least as much political and military, and even social, as connected with trading and industrial development.

*Russia  
would  
prefer  
to wait.*

*The work  
urgent.*

China has been giving the world further proofs of her decrepitude and helplessness. The two great Western Powers—Great Britain and France—have planted themselves firmly upon her southern border, and are striving, by the opening of new land and water routes, to obtain a commercial command of her rich back provinces that some day may take the form of territorial appropriation. Germany is in the offing, eagerly watching for an opportunity of stepping in and claiming a share in the "partition of China." Above all, there has been

the phenomenal rise of the Empire of Japan to the position of a great naval and trading power in the Pacific. Her recent easy triumph, by land and sea, over her bulky and inert neighbor was the final demonstration of the first-class importance of Japan as a factor in Eastern politics; it proved, moreover, that Japanese policy has before it a settled and resolute purpose, and behind it the impelling force of a united and patriotic national feeling.

*Importance of Japan in the East.*

While such movements were going forward, Russia could not afford to remain quiescent. She, too, must open her trade routes and establish herself firmly along the Chinese borderlands and on the shores of the Pacific—if possible, on waters unobstructed by ice all the year round—if she was to have a hand in the game in which she means to play the trump card. She must make her “contiguity to China” a real and effectual fact, and not a mere geographical expression. She must be ready and able to put down her foot and stretch forth her hands when the day comes for the dividing of the spoil. This may in part be done by the opening and improvement of sea and river routes. But obviously the one strong and indispensable band for fastening the basin of the Amur to that of the Volga is the “link of steel” of a trans-Siberian railway.

*Trade route for Russia.*

Other reasons, not less weighty, demanded that the work should go forward in right earnest. Enormous as is the area of European Russia, the country is beginning

*Enormous population of Russia.*

to be found too narrow for a growing population already numbering over a hundred million of souls, who are, for the most part, directly dependent on the produce of the soil. In many provinces there is even now a congested rural population, with the natural consequences of increasing pauperism, and discontent, and recurring famines.

*Utility of  
Siberia.*

The settlement of Siberia, therefore, is thrust upon her as a national necessity as well as a national good. Hitherto, during the three centuries she has more or less held possession, she has used Siberia as the lumber-room—nay, as the “cesspool”—of the Empire. The country is in many parts prodigiously fertile, and abounds in forest and mineral wealth. Important towns, the centres of agricultural, mining, and manufacturing industry, have sprung up on the banks of the great Siberian rivers and at their roots among the hills. What these cities—Irkutsk, Krasnoyarsk, and the rest—chiefly suffer from is their isolation; the vast distances, traversed only by sledge or lumbering *tarantass*, that separate them from each other and from the great centres of European civilization and trade. Emigration has for many years been running with a quickened current across the Urals, which look more of a barrier on the maps than they are in nature. Colonization of the rich farming, stock-raising, and metalliferous regions of Siberia has begun in earnest. It needed but the opening of a railway to make the stream a flood.

The scheme of laying a line of railway from the Urals to the Chinese frontier and the Pacific had long been maturing in the minds of the rulers of Russia. But in the end, the decision in the crucial questions of route, point of departure, and terminus, and plan and time of construction, had to be taken with some degree of precipitancy. When the problem was finally settled by the Special Commission of 1890, three routes came into competition. One was a modification of a plan chosen fifteen years before, by which the Ural Mines Railway would have been connected with Nijni-Novgorod, and extended from Tiumen toward the east. Another was a prolongation of the Orenburg Railway across the waterless and almost uninhabited steppes to the East, to the great Barnaul mining district and the skirts of the Altai chain. The route selected was a middle way. It is a continuation eastward of the line passing through Samara, Ufa, and Zlatoust, to Miass and Cheliabinsk within the borders of Siberia.

*The scheme not new.*

*Three routes considered.*

Its merits and demerits compared with the competing routes need not now be discussed. Among its advantages is the fact that it passes through the fertile and relatively well-peopled "Tchernozem" zone of the province of Tobolsk, avoiding alike the great marshes and forests and wide rivers of the north, and the arid and desert steppes to the south. It will feed itself, and feed the country behind and ahead, as it advances. In point of distance, there is not much to choose between the three routes, but

*Advantages of the route selected.*

what advantage there is is in favor of that adopted. It has further to be had in mind, that the other two are postponed only, not abandoned; that the destined tracks converge on each other and meet at Nijni Udinsk, fully a third on the way across Siberia; and that already the Ural Mines Railway is being coupled to the Trans-Siberian by a connecting line from Ekaterinburg to Cheliabinsk.

*Cheliabinsk the starting-point.*

This latter town is taken as the starting-point of the Great Siberian Railway, and it must be remembered that on reaching it the traveller, say from Calais, will have already made a journey of well-nigh 3,000 miles overland. Beyond it, the line, as the route is at present laid down, traverses a distance of 7,083 versts, or, including branch lines, 7,112 versts, roughly, 4,800 miles, to Vladivostok. The route and plan of construction once resolved upon, the government lost no time in entering upon the work. The final decision was not taken until the end of February, 1891, at which date the Zlatoust-Miass line had not yet been carried on to the starting-point of the Great Siberian Railway at Cheliabinsk. Three months later, as has already been mentioned, the present Emperor had cut the first sod at the other, or eastern, extremity of the line, and entered upon the active work of direction, which was confided to a special government department of which his Majesty is president.

It will be strange if, all things reckoned, the cost to the

Government of Russia falls much, or any, short of fifty millions sterling.

Besides this initial outlay, the working of it is certain to entail for many years a burden on the Russian treasury. The opening of the line for through traffic, it has been seen, will be the affair of the early years of next century. But the industrial and agricultural development of Siberia, and of the countries bordering on the Pacific, on a scale large enough to make this vast enterprise profitable, must be postponed to a date considerably more remote; and not in the conveyance of such high-priced goods as tea and silk is the overland route likely to compete successfully, under present conditions, with the sea route in the markets of Western Europe.

*Profits  
of the  
enterprise.*

On the other hand, the political, the social, and the economical influences of the Great Siberian Railway begin already to be felt. Every year they will become more marked. One problem of extraordinary interest is being worked out along the line. Convict labor, under a gang system, is being applied to the building of the railway. In the western and central sections, at least, it is said to be attended with excellent results. For prisoners, eight months of railway labor reckons as one year's imprisonment, and exiles have their terms shortened by counting one year as two. They are working out their own salvation.

*Influences  
of the  
Railway.*

*Use of con-  
vict labor.*

A yet more tremendous question, for Russia and for other countries, is that of the free colonization of Siberia.

*Free col-  
onization.*

This has at length begun in earnest. The running eastward of the line into the fertile plains of the Irtysh and the Obi has been like cutting a gap in a dam. A rush of emigrants from the crowded communes of Great and Little Russia has followed, and every year it has grown in volume. The temptations held out by the government to the peasants to settle in the provinces of Tobolsk and Tomsk—cheap railway fares and a free allotment of forty-three acres of Crown land—do not seem extravagant, considering the remoteness of the scene and the severity of the winter climate. But they have been sufficient to set a great human tide flowing eastward.

*President  
Carnot  
murdered.*

[In 1891, England obtains pre-emption of the Portuguese territories in Africa. In 1892, the Pope orders Catholics to accept the French Republic. In 1893, the Bering Sea arbitration in Paris decides against the United States. A World's Fair is held in Chicago. France gains territory and privileges in Siam. Menelik, Emperor of Abyssinia, abrogates the treaty with Italy. Italian forces capture Agordat and, the following year, Kassala. In 1894, President Carnot of France is murdered. The Dreyfus case is begun by the arrest of the captain as a spy. A revolt makes the King of Korea call upon China for assistance. Japan sends troops also and proposes joint action. After much dispute, war breaks out between China and Japan. The latter captures Port Arthur.]



# THE BATTLE OF THE YALU

(A.D. 1894)

EASTLAKE AND YOSHI-AKI

THE victories achieved by the arms of Japan were very evenly divided between the two branches of the service. If the land-troops carried all before them at P'yŏngyang, Kangwasae, Newchwang, and a dozen other places, the fleet was no less successful off Phungdo, in the Yellow Sea, and at Wei-hai-wei. The naval engagement of the Yellow Sea, better known by the style of the Fight of Haiyang—an important island near the scene of the conflict—is unique in the annals of this century. For here, for the first time on record since the great change in naval construction, two fleets of the most modern and powerful type met in deadly warfare, the result being significant of the tremendous nature of the weapons now employed by “civilized” nations and the fury with which the battle was fought on both sides. It was a deadly grapple between two ancient foes, with all the skill on one side and all the victory; though the Chinese did not fall behind in point of

*First battle  
between  
modern  
warships.*

*Causes of  
China's  
defeat.*

bravery and determined pluck. According to naval experts in this part of the world, the Chinese were defeated primarily because of their execrable tactics, and secondarily because they had no ships so swift as one or two of those on the Japanese side. Moreover, the Japanese vessels fought intelligently, as a compact whole; while the Chinese warships, with the exception perhaps of the two great ironclads, failed to work in harmony and at no time brought their full strength to bear on the foe.

*Vessels  
of the  
Japanese  
fleet*

It was on September 16, 1894, that the Japanese fleet left the temporary anchorage at the mouth of the Taidong River. The next day, after a fruitless cruise near the Korean littoral, the fleet made for the island of Haiyang, an island of importance, as already pointed out, and one which commanded the approach to the Kinchow Peninsula. The *Yoshino*, *Takachicho*, *Akitsu-shima*, and *Naniwa*, in the order named, forming the First Flying Squadron, led the van, the flag of Rear-Admiral Tsuboi Kozo flying on the *Yoshino*. The following Principal Squadron was composed of the *Chi-yoda*, *Itsukushima*, *Hashidate*, *Hiyei*, and *Fuso*, with the *Matsushima* as flagship, Vice-Admiral Ito Sukehiro, Commander-in-Chief, being on board. Close behind followed the gunboat *Akagi* and the ex-merchant-steamer *Saikyo Maru*, transformed into a cruiser for the time being. At 6.30 A.M. the island was sighted, and the harbor—a fine one there—shortly afterward reconnoitred.

No signs of the enemy being visible, a course was shaped for Takushan, and the fleet proceeded onward after a short review, Talu Island being the objective. Steaming easily, the warships were enjoying the fine autumn day, when suddenly, at 10.50 A.M., thick smoke was seen on the port bow, low down on the horizon and northeast by east from the leading vessels. This was what the admirals had long and patiently been looking for; no doubt was entertained that the enemy was now close at hand. From the increasing volume of the smoke it was clear that the hostile war-vessels were numerous. Each ship therefore promptly cleared for action and beat to quarters.

*The enemy  
in sight.*

The weather was exceptionally fine; the sea smooth and glassy, with just a faint ripple where the light breeze touched the surface. At five minutes past noon the *Matsushima* signalled to prepare to close with the enemy. The *Akagi* and *Saikyo Maru*, not being well protected, and the former a very slow boat, were ordered to go under the port bow of the Squadron: thus getting out of the enemy's range. The Chinese formation was an irregular wedge, the *Ting Yuen* and *Chen Yuen*—the two great ironclads—leading, with the *Lai Yuen*, *Ching Yuen*, *Yang Wei*, and *Chao Yang* on the right, and the *King Yuen*, *Chih Yuen*, *Tsi Yuen* and *Kwang Chia* on the left: ten men-of-war in all. Some distance off to the north, smoke was again visible, proceeding

*Vessels in  
the Chinese  
fleet.*

from the funnels of two or three Chinese warships kept in reserve.

*The  
Chinese  
open fire.*

At 12.50 P.M. the *Ting Yuen*, though still 6,000 metres off, opened fire from her large guns, the other members of the fleet speedily following suit. The shells fell near, but did not strike the Japanese ships, the sea about them being beaten into waves and fountains of angry water, so great was the impact of the missiles. This did not of course stop the steady, swift advance of the Japanese, who as yet had not fired a single shot. Five minutes later the distance between the two fleets was decreased to 3,000 metres, and the hitherto silent men-of-war now burst into a tremendous roar of shot and shell that seemed to rend the very heavens. All the big guns on the Japanese vessels were directed toward the upper decks of the *Ting Yuen* and *Chen Yuen*, the rest of the Chinese ships being fired at with guns of smaller calibre. The Flying Squadron had by this time steamed past the enemy's front and was getting round to their starboard side; and just as the four fleet men-of-war approached the Chinese rear, the Principal Squadron, then at a distance of 4,000 metres, rapidly assumed a wedge-shaped formation, thus sheltering the *Akagi* and *Saikyo Maru* on the starboard and taking the whole of the enemy's heavy starboard fire. At 12.58 P.M., a shell from the *Matsushima's* 32-centimetre gun crashed through the upper part of the Chinese flagship's—the *Ting Yuen's*—largest mast, so that the latter was no longer able to

*The  
Japanese  
attack.*

make signals to the rest of the fleet. Taking advantage of this accident, the Japanese Principal Squadron opened out and surrounded the Chinese ships, firing most fiercely the while. The enemy, at a loss what to do, the flagship no longer directing them, steamed confusedly hither and thither, their formation being completely broken. Each acted independent of the rest, to the great loss of time and force. Some of the Chinese ships now caught sight of the *Akagi* and *Saikyo Maru*. Deeming these two an easy prey, they steamed toward them, entirely separating themselves from the rest. The Japanese vessels, on the other hand, maintained their original line and continued to fire at each ship with precision and terrible effect. Six of the ten Chinese ships had by this time caught fire, while the *Chao Yang* and *Yang Wei* got quite apart from the others. Some of the enemy's vessels approached the *Hiyei* and *Fuso*—both small warships—in the rear of the Principal Squadron. The *Hiyei's* position was, for a while, one of extreme peril, there being great danger of her getting rammed; yet with reckless bravery her commander thrust the ship directly between the powerful *Ting Yuen* and the *Chen Yuen*, this being the one possible chance of escaping destruction. The manœuvre was successful, and discharging her broadsides as she steamed ahead at full speed, the *Hiyei* passed through and got to the rear of the attacking vessels. The *Saikyo Maru* then steamed rapidly ahead to carry the news of the peril of the *Hiyei* and

*Loss of  
the Chinese  
formation.*

*Chinese  
ships on  
fire.*

*Escape of  
the Hiei.*

*Akagi* to the Principal Squadron; and when the message was made out through the clouds of smoke, the flagship at once ordered the First Flying Squadron to proceed to the aid of their comrades. The order was promptly obeyed, the four fine warships immediately steering westward. They steamed directly for the *Lai Yuen*, *Chih Yuen* and *Kwang Chia*, keeping the enemy on their port bow as they approached. The gunners stationed there fired rapidly and with magnificent precision, handling their huge weapons with skill and judgment. At a distance of 2,800 metres the cannon of the Flying Squadron proved too much for the three hostile vessels, which slowly turned and attempted to get back

*Success of  
the Flying  
Squadron*

to their Main Squadron. This, however, the Japanese hindered them from doing, keeping a middle course between the three ships and the rest of their fleet; while the Principal Squadron, having come up to the rear, interposed between the Flying Squadron and the other Chinese vessels. The battle now reached its climax, the firing being stupendously heavy, the air dark with shot and shell, while the sun itself was obscured by the pall of smoke overhanging the whole scene. Just before this, when the Flying and then the Principal Squadrons had gone to the relief of the *Hiei* and *Akagi*, the cruiser

*Jeopardy of  
the Saikyo  
Maru.*

*Saikyo Maru* was left quite alone, despite which fact she kept up fighting with the enemy. At 2:20 P.M., a 30.5-centimetre shell from the *Ting Yuen* struck and exploded back of the officers' ward on the *Saikyo*, causing

great damage and cutting the steam pipe controlling the steering-gear. Signalling what had happened to the flagship, the *Saikyo* ran between the *Akitsu-shima* and *Naniwa*, getting on the port bow of the Chinese fleet, some vessels of which at once started to sink the injured cruiser, which did her best to get away from her opponents. About this time, moreover, the several men-of-war which the Japanese had believed to be the Chinese reserve, drew near. These were the *Ping Yuen*, *Kwang Ping*, and two torpedo-boats. They could not come up with the Principal Squadron, on account of the quick-firing guns, but noticing that the *Saikyo* was in great straits, the *Ping Yuen*, *Kwang Ping*, and the two torpedo-boats started to sink her. Everybody had been breathlessly awaiting the result of the torpedo-boat attack; and when the *Saikyo* was out of immediate danger the Chinese men-of-war surrounding her found themselves at close quarters with several Japanese war-vessels. The *Chao Yang*, which had first taken fire, now went down stern-foremost; while the *Yang Wei*, seeing that her case was hopeless, ran toward the shallow water and beach of Talu Island.

*Sinking of  
the Chao  
Yang.*

A little before this, the *Ting Yuen*, which had failed in her attack on the *Saikyo Maru*, tried to get back to the rest of her comrades. Just as she was about passing in front of the Japanese Fleet, she suddenly changed her course and made as if she would either ram the *Matsu-shima* or else discharge a fish-torpedo at the Japanese

*The Ting  
Yuen's  
gallant  
fight.*

flagship. From doing either she was prevented by the violent fire poured from the *Matsushima's* batteries. Sheering off to starboard, the *Ting Yuen* shaped her course at right angles to the Japanese line. On her port-bow becoming visible another broadside was poured into her from the *Matsushima's* guns. As the *Ting Yuen* was not more than 1,500 metres distant at the time, the effect of this broadside was tremendous, great holes being beaten into her side, whence volumes of smoke soon came pouring forth. A fire had started on board. In revenge, the *Ting Yuen* fired several rounds from her 26-centimetre guns, one shell entering the *Matsushima's* starboard quarter, plunging through the doctors' ward or surgery on the lower deck, severely shattering the steel fender, and, after passing down the torpedo-tube, finally destroying the barbette containing the 32-centimetre gun. Almost immediately afterward a 47-centimetre shell tore through the *Matsushima* into her central torpedo-room, striking the mainmast and causing numerous fatal and other injuries. None the less, it was evident that great confusion reigned on board the *Ting Yuen*, in consequence of her adversary's steady fire.

*Flight of  
Chinese  
vessels.*

The First Flying Squadron were now in hot pursuit of the *Kwang Chia*, *Lai Yuen*, and *King Yuen*, which were doing their best to get out of the fight. The *Kwang Chia* ran to the north of Bucha Island, while the *Lai Yuen* headed for Talok; the *King Yuen* being thus left alone. The firing from the four vessels composing the



Flying Squadron was then concentrated on the wretched *King Yuen*. She was already on fire, and now keeled over to port, turning completely over. The flagship then recalled the Flying Squadron from further pursuit of the other two Chinese vessels, and the four swift men-of-war steamed obediently back to the Principal Squadron.

In the meantime, the latter Squadron had been waging a furious war with the *Ting Yuen*, *Chen Yuen*, *Chih Yuen*, and *Ping Yuen*, the best ships the enemy still had afloat. The *Chih Yuen*, trusting to her powerful frame, bravely attempted to run down some of her persistent adversaries; but the Flying Squadron coming up, the devoted vessel was made the object of a tremendous assault. Shot through and through, she listed to starboard and sank. This occurred at just 3:30 P.M. The Principal Squadron now concentrated their fire on the *Ting Yuen* and *Chen Yuen*, the destruction of one or both of these big battleships being the great ambition of every vessel in the Japanese Fleet. At 3:30 P.M., just as the *Chih Yuen* sank beneath the waves, two shots from the 30.5-centimetre gun of the *Ting Yuen* wrought great havoc aboard the *Matsushima*, the lower deck on the port side being dreadfully cut up. A fire broke out on the sorely tried *Matsushima*, which took quite half an hour to extinguish. The *Ting Yuen*, it was simultaneously observed, had again caught fire.

*Sinking  
of the  
Chih Yuen.*

From first to last Vice-Admiral Ito, Commander of the Combined Squadrons, kept his place on the bridge.

*Bravery of  
Admiral  
Ito.*

Yet his ship, the *Matsushima*, suffered most; the gunners were nearly all killed or wounded, their places being supplied by landsmen.

*Flight of  
the Chinese.*

The result of the great sea-fight was that the *Chao Yang*, *Chih Yuen*, and *King Yuen* were sunk; the *Yang Wei* stranded; and the *Kwang Chia* and *Tsi Yuen* forced to run off to avoid sinking or capture. The remaining vessels, all more or less severely battered, steamed off in every direction, only the two great ironclads continuing the combat. Yet the *Ting Yuen* was now wreathed in smoke from the fire on board, and was thus incapable of prompt manœuvring; while the *Chen Yuen*, which stood by to assist her sister-ship, had a very narrow escape, the Japanese ceasing to fire only as the light died out in the western sky, at which time the *Chen Yuen* was quite a distance from Admiral Ting's flagship. The First Flying Squadron was then ordered to give over chasing the fugitives, for it was now 5:30 P.M. and growing very dark.

Taking advantage of the gathering dusk, the Chinese fleet—or rather what there was left of it—turned southward for Wei-hai-wei. To offer to pursue them would only have brought confusion upon the Japanese vessels, for the enemy had half-a-dozen torpedo-boats, and these might have inflicted serious damage in the night time. Moreover, the *Matsushima* was indeed in an evil plight, so large a portion of her crew being *hors de combat* and the vessel greatly cut up from stem to

stern. It was, under the circumstances, adjudged best to send the *Matsushima* back to Japan for repairs, and the flag of Vice-Admiral Ito was removed to the *Hashidate*.

And so the Japanese had not lost a single vessel; even the unarmored *Suikyo* was still afloat and ready to try conclusions with the enemy at any time. The victory of the Japanese was not only decisive, but even overwhelming, the Chinese losing five out of the twelve vessels that had taken part in the conflict: three sunk; one blown up, and one abandoned by the Chinese themselves.

*Completeness of the Japanese victory.*

[In 1895, the Baltic Canal is opened. The Chartered Company makes an abortive raid on the Transvaal under Dr. Jameson. China makes peace, ceding territory and opening new ports. Japan relinquishes the territory on protest by Russia, France, and Germany. Korea declares itself independent. In 1896, the Turks massacre Christians in Crete. France annexes Madagascar. The decisive defeat of the Italians at Adowa is followed by a treaty which establishes the independence of Abyssinia. Röntgen discovers the X-rays.]

*The Jameson raid.*



# DISCOVERY OF THE X-RAYS

(A.D. 1896)

H. SNOWDEN WARD

INTENSELY interesting and undoubtedly valuable is the discovery of Professor Röntgen of a certain radiant force possessing properties hitherto unknown. To the physical scientist it is important, and to the surgeon and the public extremely interesting; but when the first wave of excitement is over, it will be seen that the most wonderful phenomenon connected with the discovery is psychological. It is a striking instance of the power of the press and of a popular enthusiasm; for, curiously enough, what has so largely attracted the press and public is not new, while the actual novelty of the discovery has been practically ignored. "The new photography," so far as most of the reproduced examples are concerned, is not new, nor is it necessarily dependent upon Professor Röntgen's new "X"-rays. The photographing of the living skeleton has long been possible; the reduction of sensitive silver salts by "invisible light" has long been practiced; of the transparency of black

*A new  
radiant  
force.*

*"Invisible  
light."*

vulcanite, pitch, etc., and the opacity of many substances that are commonly called transparent, we have long been aware. At the Imperial Institute, in 1896, Captain Abney dealt very fully and experimentally with some of the photographic properties of "invisible light," but did not claim that he had made any new discovery. In fact, speaking generally, we may say that the most picturesque and popular properties of Professor Röntgen's new rays are those which they largely share with rays that were previously well-known; while the actually novel characteristics, even now but partially and tentatively established, have attracted only the investigators. The practical value of the new rays is yet to be determined, but there can be no possible doubt as to the value of the publicity that they have given to the whole subject of "photographing the invisible." The impetus given to investigation, and the dragging of much useful knowledge from the dim obscurity of science—handbooks to the workaday world of practical application—are boons for which we can heartily thank Professor Röntgen—and the newspaper correspondents.

*Impetus  
to inves-  
tigation.*

It is not for me to belittle the discovery of Professor Röntgen, but rather to show, as far as can be done with our present insufficient data, what is its actual novelty. Two classes of men are certainly premature—namely, those who pronounce it the greatest discovery of the age, and those who pooli-poooh it as valueless. The discoverer himself, like a true man of science, makes a perfectly

modest and simple statement of his results in the *Sitzungsberichte der Würzburger Physik-medie Gesellschaft*. He there states that when experimenting with a vacuum tube covered with black paper impervious to ordinary light, and passing a high-tension electric current through the tube, fluorescent substances brought near the covered tube were seen to glow. This proved that some force was being generated within the tube that was capable of passing through paper that ordinary light could not pass, and also capable of exciting fluorescence. From other points the discovery of the other properties of the unknown or "X"-rays was merely a question of time and patience. It was found that they acted upon the photographic plate similarly to light, and the means of observation principally used were, therefore, fluorescence and photography.

*Rontgen's  
discoveries.*

It soon became apparent that the new rays were able to penetrate many substances which to ordinary light were quite impenetrable. Several experiments led to the conclusion, afterward modified, that the density of bodies was the property mainly affecting their permeability. Thus it was found that a deal board was more transparent than glass or quartz. On the other hand, it was found that when glass, Iceland spar, quartz, and aluminium were tested together, the Iceland spar was much less transparent than the other bodies of about the same density. Another generalization, made by some of the English papers, was that organic substances were

*Density  
of bodies  
affects  
their per-  
meability.*

transparent, while inorganic were not. Probably this was based upon the experiments with the human hand, in which the flesh freely transmits the rays, while the bones (containing much earthy, inorganic matter) obstruct them.

*Reflection  
and  
refraction.*

Perhaps the most interesting fact about the new rays is that they can not, so far as is known at present, be reflected or refracted. A glass prism placed in the path of light-rays refracts them and spreads them out into a spectrum, but the "X"-rays go straight through the prism, and do the same with prisms of mica filled with carbon bisulphide and with water. This property prevents their being focussed with a lens—both glass and ebonite lenses have been tried. But the best test for reflection and refraction is to attempt to pass the rays through a powdered substance. Powders owe their opacity to ordinary light largely to the fact that their innumerable particles refract and reflect the rays to such an extent that they can only penetrate a small depth, even though the powdered substance be essentially transparent. Under this test it is found that powders transmit the "X"-rays as freely as the homogeneous substance. As we can not reflect the "X"-rays, we can not produce photograms in the ordinary way in which light reflected from the subject is focussed by a lens to form the image upon a sensitive surface.

And now for a few words on other methods of photographing the invisible. I need not refer in detail to



astronomical work—in which photography reveals  
myriads of stars and nebulae which no telescope could  
enable the eye to discover—or the photographing of in-  
sects in flight, projectiles in their course, or other objects  
in extremely rapid motion; for these involve only the  
use of ordinary light. The light of day, refracted by a  
prism, forms a visible spectrum which can be both seen  
and photographed. But beyond the visible spectrum is a  
long series of rays on both sides, which are photograph-  
ically active. By pure photographic means the spectrum  
beyond the visible violet has been proved to extend to  
at least nine or ten times the length of the visible por-  
tion; and beyond the red of the spectrum is a range four-  
teen times as long as the whole visible portion, the pres-  
ence of which is partly proved by photography and  
partly by the bolometer. Passing from ordinary light, we  
find the cathode rays, which were shown by Hertz and  
Lenard to be generated in the Crookes tube, and which  
have been spoken of as Hertzian light. These possess  
very many of the properties of the “X”-rays, and will  
cause most, if not all, of the phenomena which have sur-  
prised the public. They pass through many “opaque”  
substances, and are stopped by many “transparent”  
bodies. They seem incapable of reflection or refraction,  
but they can be deflected by a magnet placed in their  
path. And here comes the main difference between the  
new “X”-rays and the older cathode rays, for the former  
are not deflected by a magnet. The cathode rays, too,

*Photo-  
graphing  
the invisible.*

*The  
cathode or  
Hertz ray*

seem to have much less penetrative power in air, for the "X"-rays produce results at a distance from their source where the cathode rays have ceased to be active.

For photographing the bones within the flesh it is not necessary to use invisible light, and it is probable that the method of Sir Benjamin Richardson, described before the British Association in 1868, may be modified to give much better results than will ever be obtained with "X"-rays. In this case also the diseased structure can be seen and need not be photographed. By placing the body in an aperture with an intense light behind it, and the observer in an otherwise darkened room, it is possible to see fractures of bones, etc.

*Sir  
Benjamin  
Richard-  
son's  
method.*

# TELEGRAPHY WITHOUT WIRES

SILVANUS P. THOMPSON

TO communicate messages by telegraph between two places unconnected by any wire wherewith to convey the electric current sounds almost a mythical achievement. Yet this has been possible, over short distances, for some years. There is no “new telegraphy,” as some journalists would have us believe. The only telegraphy in the matter is the old telegraphy of dots and dashes. Neither is there anything new in the circumstance of dispensing with the metallic communication afforded by a line-wire. This only is new:—that by improvements in the details of known apparatus it is now possible thus to communicate over distances of miles where formerly the limit of range was to be measured only in as many bow-shots. Nor is this all that may yet be accomplished. The recently announced feat of telegraphing without wires <sup>1</sup> across the Bristol Channel—a distance of nearly nine miles—seems a small affair when compared with some of the unrehearsed and un-

*No new  
telegraphy.*

<sup>1</sup> This was written in 1897.

## THE WORLD'S GREAT EVENTS

*Stray  
currents.*

intended feats of electric transmission. It is barely ten years ago that one night, through an accident to Mr. Ferranti's electric lighting machinery at Deptford, the whole of the railway telegraphs over South London were for some hours completely disorganized by persistent and unauthorized signals, the stray currents being traced by their telegraphic effects not only into the Midland Countries, but even across the sea at Paris. If these things were possible once, and without prearrangement, it was obvious that by proper forethought and due expenditure of money on the requisite machinery a telegraph without wires might be established between London and Paris, or for that matter between any two places.

*Steinheil's  
discovery.*

When telegraphy first became an established fact it was supposed that two wires were necessary for communication, one to carry the current on its outward journey, the other to serve as a return path, thus constituting together a closed metallic circuit. But more than half a century ago Steinheil of Munich discovered that the earth itself conducted sufficiently well to serve as a common return for any number of separate outgoing circuits; since which time telegraphy with single lines has been the universal rule.

For telegraphy without wires several methods are possible, but they may be grouped under three heads—namely, conduction through earth or water, magnetic induction, and true electric or electro-magnetic waves.

## TELEGRAPHY WITHOUT WIRES

The first of these it is which has been known for long. A good many years ago experimental communication was thus successfully tried between the Isle of Wight and the Solent, without any connecting cable. Two stations were chosen, some miles apart, on each shore; and a line was erected along each shore, each line terminating at both ends in the sea. If now a message was transmitted along the Hampshire line, the current, instead of returning simply back through the earth, spread through earth and sea, a measurable fraction of it finding its way through sea to the submerged end of the Isle of Wight line, and along that line till it entered the sea again to complete its return course to the starting-point. To telegraph thus by conduction through sea-water needs, however, a sufficient length of coast as a base-line on both sides; and experience shows that the requisite minimum length of base-line is about as great as the distance to be crossed. Hence this method is out of the question for communication to lighthouses like the Eddystone, though it has been successfully used by Mr. Preece to communicate with the Island of Mull during a temporary breakdown of the cable connecting that island to the mainland. Many instances might be given of similar communication by conduction through the soil or the sea. When telephones were used with single lines instead of proper metallic circuits, there were continual interferences from stray noises, chiefly consequent on earth conduction and leakage from other lines.

*Conduction  
through  
sea-water.*

## THE WORLD'S GREAT EVENTS

### *Magnetic induction.*

The second method, that of magnetic induction, is scarcely applicable over so wide a range; yet it is possible under certain circumstances. In some experiments by the postal authorities wires were laid out around two large square tracts of land in South Wales, each square constituting a separate closed circuit without any chance of leakage or earth conduction from one to the other. Yet signals made in one of the squares could be detected and read upon instruments in the other square, even though several hundred yards intervened between the two. In this case the magnetic "field" created by the currents in one circuit spread invisibly into the other circuit and induced corresponding currents therein.

### *Hertzian waves.*

The third method—that of electric waves—has lately received considerable public attention, though the discovery how to transmit electric waves and detect them at a distance was made by the late Professor Heinrich Hertz so far back as 1888. The waves are started by setting electric sparks to jump between a pair of metal balls attached to an apparatus called an oscillator or sender, which is simply a metallic conductor divided at the middle to provide a spark-gap. Improved forms of the wave-emitter have been devised by Professor Righi of Bologna and by Professor Oliver Lodge of Liverpool, both of whom have labored long and well in developing scientifically the path thus pioneered by Hertz. Detectors of many kinds have been used for picking up the Hertzian waves at a distance. Foremost of these is the form used

## TELEGRAPHY WITHOUT WIRES

by Lodge, which is simply a glass tube containing some iron filings or metallic dust, connected with a small battery and a sensitive receiving instrument. This arrangement depends upon the earlier discovery by Branly that loose metal powders when exposed to electric waves change their properties temporarily, and from being almost perfect non-conductors become exceedingly good conductors of electric currents. Using such a detector, Lodge was able, at the British Association meeting at Oxford in 1894, to show the transmission of signals by electric waves from the Museum to the adjacent building of the Clarendon Laboratory, through several intervening stone walls, the detector being in connection with an electric bell or a sounder to make the signals audible. Still no large-scale experiments were carried out, mainly because of a want of sympathy between the officials of the telegraph service and the scientific experimenters. In the summer of 1896, there came to England a young Italo-Hibernian, Signor Marconi, with a project for signalling by electric waves on a closely similar plan. He uses a Righi transmitter and a modified Branly detector, consisting of very fine metallic particles inclosed in an exhausted glass tube of diminutive size. The detector is relayed on to a Morse telegraph sounder or writer, with sundry details of improvement, including a device originally suggested by Lodge for giving a mechanical agitation to the detector after each time that it has operated. With this apparatus and the powerful co-operation of

*Branly's  
discovery.*

*Marconi's  
system.*

## THE WORLD'S GREAT EVENTS

*Superiority  
of the wave  
theory.*

the Post-Office, Marconi succeeded on Salisbury Plain in sending signals across a space of two miles; and subsequently—when the apparatus was removed to the West country—from Penarth, near Cardiff, to Bream Down, near Weston-super-Mare, a distance of eight and three-quarters miles. Mr. Preece states that up to three miles the wave-method is not so successful as the conduction method with a suitable base-line, but beyond that distance the wave-method has undoubted superiority.

On the occasion of the recent Royal Society Conversation, Mr. Preece described Marconi's apparatus and exhibited it in operation; while in the Council Room, Dr. Alexander Muirhead showed Lodge's apparatus, operating for this occasion a Kelvin recorder, the transmitter (an ordinary Hertz-wave apparatus) being in another room, some eighty feet away. It is doubtless a great stride in practical progress to be able to signal to a distance of nine miles;<sup>2</sup> but this is far from the limit that can be reached with properly designed apparatus. We are yet only at the beginning of the practical research. These electric waves travel with the speed of light. They are in fact simply gigantic light-waves of an invisible kind. But, unlike the ripples of ordinary light, they are not stopped by fogs or trees or buildings. We all know what splendid service Mance's heliograph, or telegraph for flashing signals by the sun's rays, did at Ekowa sixteen

<sup>2</sup> Expectations have since been amply justified, since wireless messages have already been sent across the Atlantic.—*Ed.*



## TELEGRAPHY WITHOUT WIRES

years ago. But Mance's heliograph can not work through fog or cloud, nor across a forest. The Hertz-wave telegraph is not obstructed by any such obstacle; and the expense of installing the sending and receiving apparatus is slight compared with the cost of a submarine cable. Hence a rapid development of its applications may be expected. It is but nine years since the discoveries of Hertz in this out-of-the-way region of abstract science put into our hands the means of creating electric waves. Hertz died all too soon to see the first-fruits of the germ which he planted. Now after nine years others enter in to reap the benefit of his discoveries, and to create financial schemes for exploiting the product of his brain. Let them not forget to acknowledge that the only real novelties in the whole thing are the Hertz-wave and the Branly Lodge detector, both of which were given freely and unpatented to the world. *Mance's heliograph.*



# PHOTOGRAPHY

ALFRED RUSSEL WALLACE

THE improvements in the mode of production of light for common use are sufficiently new and remarkable to distinguish this century from all the ages that preceded it, but they sink into insignificance when compared with the discoveries which have been made as to the nature of light itself, its effects on various kinds of matter leading to the art of Photography, and the complex nature of the Solar Spectrum leading to Spectrum Analysis. This group of investigations alone is sufficient to distinguish the present century as an epoch of the most marvellous scientific discovery.

*Photography and Spectrum Analysis.*

Although Huygens put forward the wave-theory of light more than two hundred years ago, it was not accepted, or seriously studied, till the beginning of the present century, when it was revived by Thomas Young, and was shown by himself, by Fresnel, and other mathematicians, to explain all the phenomena of refraction, double-refraction, polarization, diffraction, and interference, some of which were inexplicable on the Newtonian

*The wave-theory of light.*

## THE WORLD'S GREAT EVENTS

theory of the emission of material particles, which had previously been almost universally accepted. The complete establishment of the undulatory theory of light is a fact of the highest importance, and will take a very high place among the purely scientific discoveries of the century.

From a more practical point of view, however, nothing can surpass in interest and importance the discovery and continuous improvement of the Photographic art, which has now reached such a development that there is hardly any science or any branch of intellectual study that is not indebted to it. A brief sketch of its origin and progress will therefore not be uninteresting.

*Rudiments  
of the art.*

The fact that certain salts of silver were darkened by exposure to sunlight was known to the alchemists in the Sixteenth Century, and this observation forms the rudiment from which the whole art has been developed. The application of this fact to the production of pictures belongs, however, wholly to our own time. In the year 1802, Wedgwood described a mode of copying paintings on glass by exposure to light, but neither he nor Sir Humphry Davy could find any means of rendering the copies permanent. This was first effected, in 1814, by M. Niepce of Châlons, but no important results were obtained till 1839, when Daguerre perfected the beautiful process known as the Daguerreotype. Permanent portraits were taken by him on silvered plates, and they were so delicate and beautiful that probably nothing in modern

*The Da-  
guerreotype.*

## PHOTOGRAPHY

photography can surpass them. For several years they were the only portraits taken by the agency of light, but they were very costly, and were, therefore, completely superseded when cheaper methods were discovered.

About the same time a method was found for photographing leaves, lace, and other semi-transparent objects on paper, and rendering them permanent, but this was of comparatively little value. In the year 1850, the far superior collodion-film on glass was perfected, and negatives were taken in a camera-obscura, which, when placed on black velvet, or when coated with a black composition, produced pictures almost as perfect and beautiful as the daguerrotype itself, and at much less cost. Soon afterward positives were printed from the transparent negatives, on suitably prepared paper; and thus was initiated the process which, with endless modifications and improvements, is still in use. The main advance has been in the increased sensitiveness of the photographic plates, so that, first, moving crowds, then breaking waves, running horses, and other quickly moving objects were taken, while now a bullet fired from a rifle can be photographed in the air.

*The  
collodion-  
film.*

With such marvellous powers, photography has come to the aid of the arts and sciences in ways which would have been perfectly inconceivable to our most learned men of a century ago. It furnishes the Meteorologist, the Physicist, and the Biologist with self-registering instruments of extreme delicacy, and enables them to preserve

*Scientific  
uses of pho-  
tography.*

## THE WORLD'S GREAT EVENTS

accurate records of the most fleeting natural phenomena. By means of successive photographs at short intervals of time, we are able to study the motions of the wings of birds, and thus learn something of the mechanism of flight; while even the instantaneous lightning-flash can be depicted, and we thus learn, for the first time, the exact nature of its path.

*Aids in  
astronomy.*

Perhaps the most marvellous of all its achievements is in the field of astronomy. Every increase in the size and power of the telescope has revealed to us ever more and more stars in every part of the heavens; but, by the aid of photography, stars are shown which no telescope that has been, or that probably ever will be, constructed, can render visible to the human eye. For by exposing the photographic plate in the focus of the object glass for some hours, almost infinitely faint stars impress their image, and the modern photographic star maps show us a surface densely packed with white points that seem almost as countless as the sands of the seashore. Yet every one of these points represents a star in its true relative position to the visible stars nearest it, and thus gives at one operation an amount of accurate detail which could hardly be equalled by the labor of an astronomer for months or years—even if he could render all these stars visible, which, as we have seen, he can not do. A photographic survey of the heavens is now in progress on one uniform system, which, when completed, will form a standard for future astronomers, and thus give

## PHOTOGRAPHY

to our successors some definite knowledge of the structure, and, perhaps, of the extent of the stellar universe.

Within the last few years the mechanical processes by means of which photographs can now be reproduced through the printing-press, have been rendered so perfect that books and periodicals are illustrated with an amount of accuracy and beauty that would have been impossible, even twenty years ago, except at a prohibitive cost. *Mechanical processes.*

It has long been the dream of photographers to discover some mode of obtaining pictures which shall reproduce all the colors of nature without the intervention of the artist's manipulation. This was seen to be exceedingly difficult, if not impossible, because the chemical action of colored light has no power to produce pigments of the same color as the light itself, without which a photograph, in natural colors, would seem to be impossible. Nevertheless, the problem has been solved, but in a totally different manner; that is, by the principle of "interference," instead of by that of chemical action. This principle was discovered by Newton, and is exemplified in the colors of the soap bubble, and in those of mother-of-pearl and other iridescent objects. It depends on the fact that the differently colored rays are of different wave-lengths, and the waves reflected from two surfaces half a wave-length apart neutralize each other and leave the remainder of the light colored. If, therefore, each differently colored ray of light can be *Color photography.*

## THE WORLD'S GREAT EVENTS

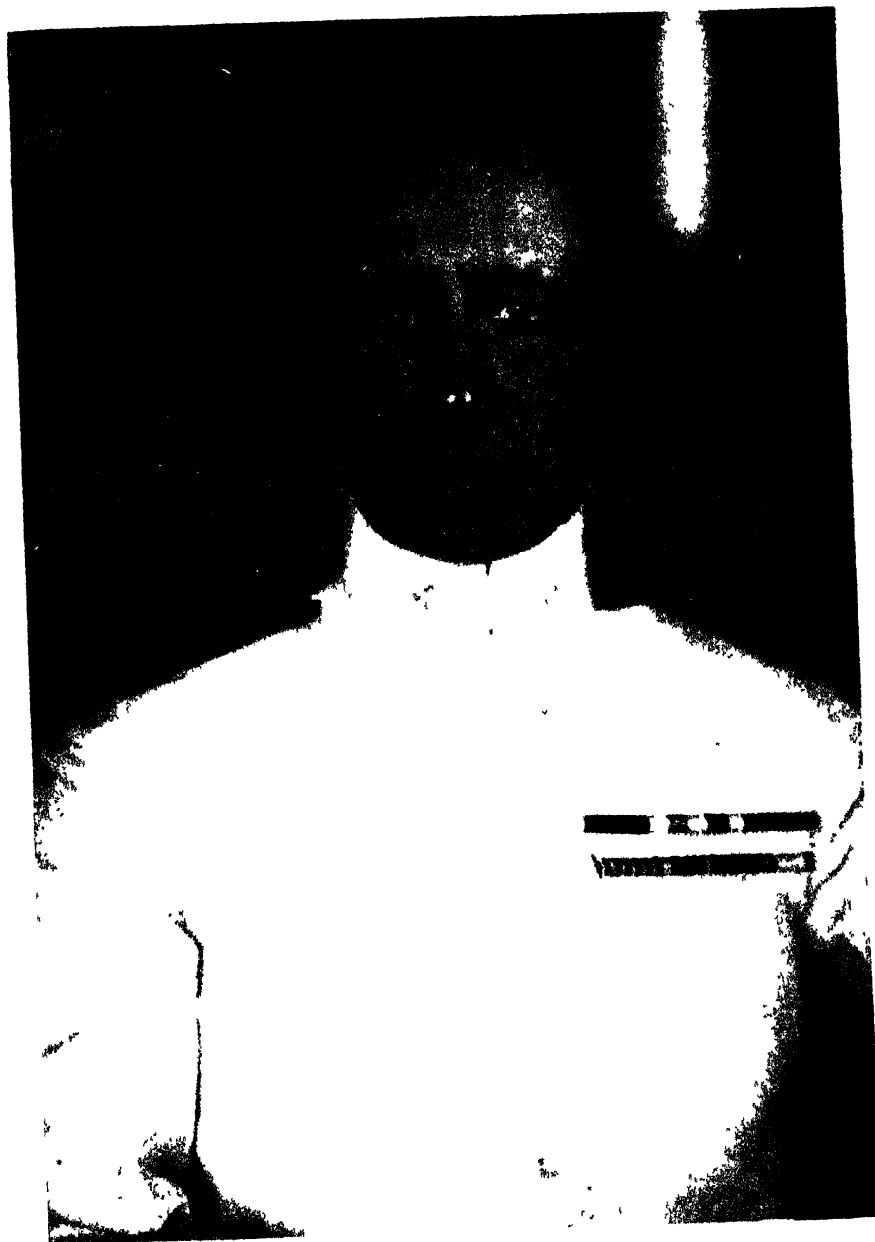
*Professor  
Lippmann's  
success.*

made to produce a corresponding minute wave-structure in a photographic film, then each part of the film will reflect only light of that particular wave-length, and therefore of that particular color that produced it. This has actually been done by Professor Lippmann, of Paris, who published his method in 1891; and in a lecture before the Royal Society in April, 1896, he fully described it and exhibited many beautiful specimens.

*Long  
exposure.*

The method is as follows: A sensitive film, of some of the usual salts of silver in albumen or gelatin, is used, but with much less silver than usual, so as to leave the film quite transparent. It must also be perfectly homogeneous, since any granular structure would interfere with the result. This film on glass must be placed in a frame so constructed that at the back of it there is a shallow cell that can be filled with mercury which is in contact with the film. It is then exposed in the usual way, but much longer than for an ordinary photograph, so that the light-waves have time to produce the required effect. The light of each particular tint, being reflected by the mercury, meets the incoming light and produces a set of *standing* waves—that is, of waves surging up and down, each in a fixed plane. The result is that the metallic particles in the film become assorted and stratified by this continued wave-action, the distance apart of the strata being determined by the wave-length of the particular colored light—for the violet rays about eight millionths of an inch; so that in a film of ordinary thick-





GUGLIELMO MARCONI (Page 191)  
FROM A PHOTOGRAPH



## PHOTOGRAPHY

ness there would be about five hundred of these strata of thinly scattered metallic particles. The quantity of silver used being very small, when the film is developed and fixed in the usual way, the result is not a light-and-shade negative, but a nearly transparent film which, nevertheless, reflects a sufficient amount of light to produce a naturally colored picture.

The principle is the same for the light-waves as that of the telephone for sound-waves. The voice sets up vibrations in the transmitting diaphragm, which, by means of an electric current, are so exactly reproduced in the receiving diaphragm as to give out the same succession of sounds. An even more striking and, perhaps, closer analogy is that of the phonograph, where the vibrations of the diaphragm are permanently registered on a wax cylinder, which, at any future time, can be made to set up the same vibrations of the air, and thus reproduce the same succession of sounds, whether words or musical notes. So, the rays of every color and tint that fall upon the plate throw the deposited silver within the film into minute strata which permanently reflect light of the same wave-length, and therefore of the very same color as that which produced them.

*Analogy  
between  
sound and  
light.*

The effects are said to be most beautiful, the only fault being that the colors are more brilliant than in nature, just as they are when viewed in the camera itself. This, however, may perhaps be remedied (if it requires remedying) by the use of a slightly opaque varnish. The

*Brilliancy  
of effect.*

## THE WORLD'S GREAT EVENTS

comparatively little attention that has been given to this beautiful and scientifically perfect process, is no doubt due to the fact that it is rather expensive, and that the pictures can not, at present, be multiplied rapidly. But for that very reason it ought to be especially attractive to amateurs, who would have the pleasure of obtaining exquisite pictures which will not become commonplace by indefinite reproduction.

*An entirely  
new  
departure.*

This beautiful and wonderful art, which already plays an important part in the daily life and enjoyment of all civilized people, and which has extended the bounds of human knowledge into the remotest depths of the starry universe, is not an improvement of, or development from, anything that went before it, but is a totally new departure. From that early period when the men of the stone age rudely outlined the mammoth and the reindeer on stone or ivory, the only means of representing men and animals, natural scenery, or the great events of human history, had been through the art of the painter or the sculptor. It is true that the highest Greek, or Mediæval, or Modern, art can not be equalled by the productions of the photographic camera; but great artists are few and far between, and the ordinary, or even the talented, draughtsman can give us only suggestions of what he sees, so modified by his peculiar mannerism as often to result in a mere caricature of the truth. Should some historian in Japan study the characteristics of English ladies at two not remote epochs, as repre-

*Exact  
records.*

## PHOTOGRAPHY

sented, say, by Frith and by Du Maurier, he would be driven to the conclusion that there had been a complete change of type, due to the introduction of some foreign race, in the interval between the works of these two artists. From such errors as this we shall be saved by photography; and our descendants in the middle of the coming century will be able to see how much, and what kind of, change really does occur from age to age.

The importance of this is well seen by comparing any of the early works on Ethnology, illustrated by portraits intended to represent the different "types of mankind," with recent volumes which give us copies of actual photographs of the same types; when we shall see how untrue to nature are the former, due probably to the artist having delineated those extreme forms, either of ugliness or of beauty, that most attracted his attention, and to his having exaggerated even these. Thus only can we account for the pictures in some old voyages, showing an English sailor and a Patagonian as a dwarf beside a giant; and for the statement by the historian of Magellan's voyage, that their tallest sailor only came up to the waist of the first man they met. It is now known that the average height of Patagonian men is about five feet ten inches, or five feet eleven inches, and none have been found to exceed six feet four inches. Photography would have saved us from such an error as this.

*Importance in  
Ethnology.*

That such a new and important art as photography should have had its birth, and have come to maturity,

## THE WORLD'S GREAT EVENTS

so closely coincident with the other great discoveries of the century already alluded to, is surely a very marvelous fact, and one which will seem more extraordinary to the future historian than it does to ourselves, who have witnessed the whole process of its growth and development.

*Hawaii  
annexed.*

*The Maine  
destroyed.*

[In 1897, the Diamond Jubilee of Queen Victoria is celebrated. Greece openly sides with the Cretan insurgents and is invaded by the Turks. Greece speedily makes peace with loss of money and territory. Gold is discovered in the Klondike. The United States annexes Hawaii. Andree tries to reach the North Pole in a balloon and disappears. Germany acquires Kiao Chau, China, as indemnity for murdered missionaries. In 1898, the Austrian Empress is murdered. The United States battleship *Maine* is destroyed in Havana Harbor. Spain is ordered to evacuate Cuba. Dewey destroys a fleet at Manila and Sampson another at Santiago. Peace is made by the Spaniards relinquishing Cuba and Porto Rico and receiving \$20,000,000 for the Philippines. General Kitchener, with an Anglo-Egyptian army, annihilates the Dervishes at Omdurman. An Anti-Foreign Society, called the Boxers, is formed in China to get rid of foreign influence.]

# THE BATTLE OF SANTIAGO

(A.D. 1898)

WILLIS JOHN ABBOT

THE first ship out was the *Maria Teresa*. Behind her came the *Vizcaya*, the *Cristobal Colon*, and the *Almirante Oquendo*. To meet them all the ships of the blockading fleet were standing in toward the harbor, firing rapidly from every gun that could be brought to bear. According to the plan of the blockade, the American vessels were lying still and had to get under way,—a slow process for a 10,000-ton battleship when the enemy is forging past under full headway. *The Spaniards leave the harbor.*

The *Maria Teresa* rounded the shoals and turned west. The little *Vixen*, which lay near the *Brooklyn*, let fly with her 6-pounders when she saw the huge bulk of the *Maria Teresa* turn toward her, and then prudently slipped away. But the rest of the American ships, with funnels belching black smoke, and turrets, hulls, and tops spurting out red flame and yellow smoke, came rushing down toward the enemy. *Retreat of the Vixen.*

As the enemy came rushing out of the harbor, the

*The  
Indiana  
opens the  
flight.*

American vessels to the eastward steamed down as fast as possible, maintaining a fierce fire the while from everything that could be brought to bear. The batteries on shore turned loose at the Americans, but no attention was paid to them. Nearest the shore was the *Indiana*, and she, too, was nearest the leading ship of the enemy at the moment of beginning the battle. The water about this battleship fairly boiled with the flood of projectiles that poured down from Morro and sped from the broad-side with which the *Maria Teresa* opened. The *Indiana* scored more than one hit on the *Teresa*, as that ship was making her turn to the west, and then gave her attention to the *Vizcaya*.

*Need of  
caution.*

Straight toward the fleeing enemy steamed the *Iowa* and *Oregon*, belching forth great clouds of smoke until they looked like huge yellow clouds on the water. Then came the time when a cool head and a clear eye were necessary for the captain of an American ship. As the battleships closed in on their prey, they overlapped one another, and careless use of the guns or a failure to make out accurately the target might have resulted in one of our ships firing into another. But so skilfully were our ships handled that at no time were they put in jeopardy from either the guns or the rams of one another, though at one time the *Oregon* was firing right across the decks of the *Texas*.

The hapless *Maria Teresa* was the first ship to leave the harbor, and her end was swift and frightful. Upon



her for a time the fire of all the American squadron was concentrated. The shells from the great turret-guns for the most part went wild, but the 5-inch and 6-inch shells and the storm of smaller projectiles searched out every part of the doomed ship, spread death and ruin on every hand, and soon had her woodwork ablaze. Her gunners for a time stood manfully to their guns, and the scarlet flames jetted viciously from her sides like snakes' tongues. Little smoke hung about her, and she stood out bold and black against the green background of the hills, a perfect target. A shot from the *Brooklyn* cut her main water-pipe; a shell, supposed to be from the *Oregon*, entered her hull and exploded in the engine-room; a 6-inch shell from the *Iowa* exploded in her forward turret, killing or wounding every man at the guns; while the tempest of smaller projectiles made the decks untenable, and by the din of their bursting silenced the officers' commands. Admiral Cervera himself was on this devoted ship. "He expected to lose most of his ships," said one of his officers afterward, "but thought the *Cristobal Colon* might escape. That is why he transferred his flag to the *Maria Teresa*, that he might perish with the less fortunate."

*Destruction of the  
Maria  
Teresa.*

*Cervera's  
devotion.*

The *Teresa* had come within the zone of the American fire at about 9.35 A.M. Within fifteen minutes smoke was rising from her ports and hatches, indicating that she had been set afire by the American shells. The shot from the *Brooklyn* that had cut her water-main made it

*The deadly  
American  
fire.*

impossible to extinguish the flames, and, the fire from the American ships growing more accurate and more deadly every minute, she was beached at 10:15 and her flag hauled down. On the *Texas* the men raised a shout of joy. "Don't cheer, men," said Captain Philip from the bridge; "those poor fellows are dying." Admiral Cervera's own race for life and liberty lasted less than forty minutes. Clad in underclothes only, he tried to escape to the shore on a raft, directed by his son, but was captured and taken to the *Gloucester*, where he was received with honors due his rank. His voyage away from Santiago covered exactly six miles and a half, and his brief experience with American gunnery cost nearly half his officers and crew.

*The  
Vizcaya  
follows.*

Behind the *Maria Teresa*, at an interval of about 800 yards, came the *Vizcaya*, and under gathered headway rushed on to the west, passing the heavier battleships *Iowa* and *Indiana*, but receiving terrible punishment from their guns. In a newspaper interview on his arrival as a prisoner in the United States, a lieutenant of the *Vizcaya* spoke of the murderous effect of the shells from the *Indiana*. "The carnage inside the ship was something horrible and beyond description. Fires were started up constantly. It seemed to me that the iron bulkheads were ablaze. Our organization was perfect. We acted promptly, and mastered all small outbreaks of flame until the small ammunition magazine was exploded by a shell. From that moment the vessel became a furnace

of fire. While we were walking the deck, headed shoreward, we could hear the roar of the flames under our feet above the voice of artillery. The *Vizcaya's* hull bellowed like a blast furnace. Why, men sprang from the red-hot deck straight into the mouths of sharks."

But the *Viscaya* lasted longer than the *Almirante Oquendo*, which followed her out of the harbor. While the former ship made her turn at the harbor's mouth and headed west on the coast, with the *Brooklyn*, *Oregon*, and *Texas* in full pursuit, the latter fell an immediate prey to the fire of the *Indiana* and *Iowa*. Though accredited with speed equal to that of her sister ships, she lagged that day of all times, and received a fiercer baptism of fire than fell to the lot of any of her ill-fated comrades. She bore the punishment five minutes longer than the *Teresa*; then, with flames pouring out of every opening in her hull, she made for the beach, hauling down her flag in token of submission, while men were dropping from her red-hot decks to the water. Two great Spanish war vessels were thus destroyed in the first three-quarters of an hour, and the American fleet, as though hungry for more victims, was concentrating its fire now on the two that were left.

Leaving the *Teresa* and the *Oquendo* flaming and smoking on the beach, the chase swept on. The *Vizcaya* was still making a gallant running fight, and the greatest of all the Spanish ships, the magnificent *Cristobal Colon*, named after the man who had given to Spain

*Destruction of the Almirante Oquendo.*

*Chase of the Cristobal Colon.*

this western domain she was now in process of losing, the ship which alone Admiral Cervera had hoped to save from the wreck he foresaw, was racing along the coast near the shore, and protected from the American vessels in some degree by the *Vizcaya*. While she fled, disaster fell upon the two torpedo boat destroyers, *Pluton* and *Furor*.

*Bad handling of the torpedo-boat destroyers.*

As the cruisers came out, Wainwright joined in the general cannonade with his little six- and four-pounders, but he did not join in the chase. With quick comprehension of the situation, he determined that the torpedo destroyers were his fair game, and he determined to await their appearance, meanwhile letting steam accumulate in his boilers in order to have plenty of speed when the crucial moment should arrive. The destroyers were slow to come out. For some reason yet unexplained Cervera, schooled tactician as he was, failed to handle them in the only way in which they might be made of service. Instead of bringing them out of the harbor on the lee, or protected, side of the heavier vessels, and letting them slip out when our ships were nearest, he left them to make their appearance alone and undefended. As if this were not enough to ensure their impotence and their certain destruction, the destroyers themselves were manœuvred with an entire lack of that audacity and even desperation which alone can make one of these vulnerable craft formidable. Instead of dashing at the nearest American ship, and trusting to the rapidity of

their progress and the small target they offered for their safety, both the *Pluton* and the *Furor* followed the example of the cruisers, and turned along the shore to the westward. Cervera's torpedo destroyers ran away. The gunners on the larger American cruisers sent a storm of projectiles from the secondary batteries after them, but the real, serious attack was left to the little *Gloucester* and Wainwright. *They run away.*

In a cloud of smoke from her own guns, the former yacht sped forward, receiving and ignoring shots from the batteries and the nearer Spanish cruisers. One 6-inch shell would effectually terminate her career, and many were fired at her; but her captain had eyes only for the two destroyers, and only one desire, to come to close quarters with them before they could either be sunk by our battleships or strike our vessels a blow. Either of the destroyers was more than a match for the *Gloucester*. Their batteries alone were of twice the power, without considering at all the engines of destruction which they could let slip from their torpedo tubes. In a few minutes from the moment the enemy was sighted, Wainwright was engaged with the two destroyers at short range, and under the fire of the *Socapa* battery. In a few minutes both destroyers began to smoke ominously, and the rapidity of their fire fell off. Then the *Furor* became erratic in her course, as though her steering-gear had been cut. Wainwright closed in savagely, and his men at their unprotected guns redoubled their efforts. *The Gloucester pursues.* Sud-

*The Pluton  
blows up.*

denly, amidships on the *Pluton*, there shot up a prodigious cloud of smoke and flame with a deafening roar and shock that could be felt across the water despite the thunders of the guns. A shell from one of the battleships—three afterward disputed for the honor—had struck her fairly, and exploded either the magazines or the boilers, or both. Broken in two by the rending blast, she sank like a stone. Balked of half his chosen prey, Wainwright pursued the other craft the more relentlessly. She was already clearly crippled, and made pathetic efforts to escape. At last, fairly shot to pieces, she hauled down her flag, and ran for the line of breaking surf, where her men leaped overboard to escape the fierce flames that were sweeping resistlessly from bow to stern below. Changed in an instant from a relentless enemy to a succoring friend, Wainwright manned his boats, and went to the rescue of the survivors on the burning ship. Many were saved, and the Americans had barely left the smoking mass of scorching steel and iron, when it blew up with a resounding roar, and the Spanish torpedo destroyers had vanished. They lasted just forty minutes under the American fire, and at no time had been a serious menace to any American ship.

*End of the  
Furor.*

*Progress of  
the battle.*

The action had now continued for about three-quarters of an hour. The *Infanta Maria Teresa* and the *Oquendo* were blazing on the beach with their colors struck. The two torpedo destroyers were annihilated. The battleship *Indiana*, which had been distanced by the

enemy in his rush to the eastward, had been signalled to turn in toward the shore, and give aid to the survivors on the burning ships. Two Spaniards only were still afloat,—the *Viscaya*, running and fighting bravely in a hopeless struggle for life, and the great *Cristobal Colon*, which was rushing, with the momentum of a planet in its course through space, down the coast to the westward. In the chase of these two vessels, the *Brooklyn* held the place of honor. Her station on the blockade when the enemy came out was such as to give her a commanding position, and her speed kept her well to the front throughout. Next to her at the outset was the *Texas*, a battleship which for years the newspapers had been describing as unlucky and “hoodooed,” but which in this battle developed marvellous speed and fought with reckless gallantry. The *Oregon*, third in the race at first, by a dash which no one thought possible for a ship of her weight and structure, passed the *Texas*, and actually came up with the *Brooklyn*. The fire of these three vessels as they sped along, and that of the *Iowa*, which was only a short distance in the rear, was concentrated on the unhappy *Viscaya*. She had passed inside the *Oquendo* and the *Teresa* when those two doomed ships were receiving the attention of the entire American fleet, and had, until they were sunk, escaped serious injury, but now, with the fire of four of the biggest and best fighting-machines in the world concentrated upon her, the stanch and beautiful vessel began to go to pieces. Her

*Position  
of the  
Brooklyn.*

*Fine work  
of the  
Oregon*

great frame quivered under the repeated blows of the heavy shells that struck it, and rung like a boiler-shop in full operation with the incessant clangor of the smaller projectiles. An hour had passed. Of the American ships that started in the chase, only the *Brooklyn*, *Texas*, and *Oregon* were hanging like hounds on the flank of the quarry. The *Indiana* had been left behind. The *Iowa*, too, had stopped to give aid to the burning and drowning men on the two blazing warships. The *Colon* was steaming ahead with no sign of weakness, but the *Vizcaya* seemed like a ship in distress. On her the fire of the three pursuers was concentrated. Admiral Schley, peering around the lee of the conning tower on the *Brooklyn*, said to his captain, "Get in close, Cook, and we'll fix her." The range was then 1,400 yards.

Fire concentrated  
on the  
Vizcaya.

The word was passed to the turrets and tops of the *Brooklyn* to aim at the *Vizcaya* only. The ship was carried in until the range was less than 1,000 yards, or little over half a mile, and the effect of the shots at that distance began to tell. The turrets were full of dead and wounded men, the machinery shattered, and the hull pierced below the water-line. Reluctantly abandoning the fight, for he was a brave officer and a gentleman, Captain Eulate turned his ship's prow toward that rocky and inhospitable shore on which already lay piled the wrecks of the *Teresa*, the *Oquendo*, and the *Furor*. As the ship swung about, a shell from the *Oregon* struck her fairly in the stern. The enormous mass of steel,

She is run  
ashore.



charged with explosives of frightful power, rushed through the steel framework of the ship, shattering everything in its course, crashed into the boilers, and exploded. Words are inadequate to describe the ruin that resulted. Men, guns, projectiles, ragged bits of steel and iron splinters and indescribable débris were hurled in every direction, while flames shot up fiercely from every part of the ship. Between decks she was a raging hell of fire, and when she struck the beach the watchers from the American men-of-war could see what looked like a white line reaching from her bow to the water, which was, in fact, the naked men dropping one after another over the side to seek the cool relief of the ocean from the fiery torment they were enduring.

Thus the *Vizcaya* dropped out of the fight at 11:06, according to the timekeeper on the *Brooklyn*. One hour and a half had been the period of her endurance of the American shells. The *Colon* was now left alone. Thus far her career had not been glorious, for she had simply run away, not making any effort to stand and give battle to her pursuers, and not even keeping up a very fast fire from her guns. In her speed was her one hope of escape, and her captain trusted to it wholly. From the very first shot of the battle the Spaniards had done nothing but run. Their fire, such as it was, was only intended as an aid to their escape. Had Cervera come out of Santiago intent upon fighting a desperate battle, he might indeed have lost all his ships, but in all probability he

*Flight of  
the Colon*

No possibility of escape.

would have taken at least one of the American vessels to the bottom with him. His running fight only resulted in the loss of all his ships without inflicting the slightest loss upon the Americans. The *Colon* adhered strictly to the plan which had thus far characterized the Spanish tactics. It was quickly evident to those on the foremost of the pursuing ships that there could be no escape for the fugitive. Even had not the Americans developed unexpected speed, the course of the ships was such that the *Colon* would inevitably be cut off. A cape jutted out into the ocean at some distance before her, which she would have to round. The *Brooklyn*, being further out to sea, was headed for that headland in a direct line, while the doomed *Colon* had a long curve to make to reach it. A signal from the *Brooklyn* suggested to the *Oregon* that she try one of her 13-inch guns on the chase. The great cannon flashed and roared from the forward turret, and the shell, which rushed past the *Brooklyn* with a noise like a railway-train, fell short. On they sped a little further, the *Oregon* visibly gaining on the fastest ship of the Spanish navy, a battleship built for weight and solidity overhauling a cruiser built for speed. Presently another shell was tried. It fell nearer the fugitive, near enough for the captain of the fleeing foe to read in its splash in the water the death-warrant of his ship. At such a moment some men would turn fiercely and sell their lives as dearly as might be, but that instinct was lacking to the Spaniard. Instead, he turned his almost



ADMIRAL CERVERA'S SHIPS PASS FROM SANTIAGO DE CUBA HARBOR (P<sub>26</sub>C-2-5-218)

FROM A DRAWING - BROWN PHOTOGRAPH



uninjured ship toward the shore and beached her, hauling down his flag as she struck. Either before the surrender or after, her engineer's crew opened and broke the sea valves so as to destroy the ship. If this was done before the flag was hauled down, it was a legitimate and proper act; if after, it was dishonorable and treacherous. Captain Cook went in a boat to take possession of the prize, his crew being ordered not to cheer or exult over the vanquished. The ship had been struck but eight times, and not by shells of large calibre, and she would have been a useful prize but for this sly work below. There were plain indications that officers and men had been drinking heavily. An effort was made to save her by the *New York*, which came up just after the surrender. Captain Chadwick, seeing the ship beached and fearing that she would slip off and sink in deep water, laid the nose of the *New York* up against her stern and pushed her gently but firmly up the shelving strand. The manœuvre was useless. Before another day the great cruiser had filled and rolled over on her side and lay a perfect wreck on the desolate and uninhabited shore of Cuba at the mouth of Rio Tarquino. It was the exact spot where the ill-fated *Virginus* expedition tried to land. More scores against Spain than that set down on account of the *Maine* were wiped out that day.

*The Colon is beached.*

*Drunkenness of the crew.*

So ended, after less than four hours' fighting,—for the *Colon* surrendered at 1:15 P.M.,—a naval battle that possesses many extraordinary and unique qualities. It

*End of  
Spanish  
naval  
power.*

completed the wreck of Spanish naval power which had been in slow and interrupted progress since our Anglo-Saxon progenitors strewed the Channel with the wrecks of the Invincible Armada. It dealt the decisive stroke in the war which deprived Spain of her last remnant of American colonies. It was of absorbing interest to naval experts in all parts of the world, because it was the only considerable battle in which heavy men-of-war of the modern type and with modern armament had ever been pitted against each other on anything like equal terms. And it was unique in that, while the defeated fleet lost six ships, more than 600 men killed and drowned, and 1,800 prisoners, many of them wounded, the victors had but one man killed and one wounded.

# THE BATTLE OF OMDURMAN

(A.D. 1898)

G. W. STEEVENS

NIGHT stole quietly into the sky behind us; there was no sound from the plain or the hills before us; there was hardly a sound from our own line. Everybody was very silent, but very curious. Would they be so mad as to come out and run their heads into our fire? It seemed beyond hoping for; yet certainly they had been full of war the day before. But most of us were expecting instantly the order to advance on Omdurman. *Speculations in the dawn.*

A trooper rose out of the dimness from behind the shoulder of Gebel Surgham, grew larger and plainer, spurred violently up to the line and inside. A couple more were silhouetted across our front. Then the electric whisper came racing down the line; they were coming. The Lancers came in on the left; the Egyptian mounted troops drew like a curtain across us from left to right. As they passed a flicker of white flags began to extend and fill the front in their place. The noise of something *The enemy is coming.*

began to creep in upon us; it cleared and divided into the tap of drums and the far-away surf of raucous warcries. A shiver of expectancy thrilled along our army, and then a sigh of content. They were coming on. Allah help them! they were coming on.

*The first  
attack.*

It was now half-past six. The flags seemed still very distant, the roar very faint, and the thud of our first gun was almost startling. It may have startled them, too, but it startled them into life. The line of flags swung forward, and a mass of white flying linen swung forward with it too. They came very fast, and they came very straight; and then presently they came no further. With a crash the bullets leaped out of the British rifles. It began with the Guards and Warwicks—section volleys at 2,000 yards; then, as the Dervishes edged rightward, it ran along to the Highlanders, the Lincolns, and to Maxwell's Brigade. The British stood up in double rank behind their zariba; the blacks lay down in their shelter-trench; both poured out death as fast as they could load and press trigger. Shrapnel whistled and Maxims growled savagely. From all the line came perpetual fire, fire, fire, and shrieked forth in great gusts of destruction.

*The  
enemy's  
bravery.*

And the enemy? No white troops would have faced that torrent of death for five minutes, but the Baggara and the blacks came on. The torrent swept into them and hurled them down in whole companies. You saw a rigid line gather itself up and rush on evenly; then before a shrapnel shell or a Maxim the line suddenly quivered



and stopped. The line was yet unbroken, but it was quite still. But other lines gathered up again, again, and yet again; they went down, and yet others rushed on. Sometimes they came near enough to see single figures quite plainly. One old man with a white flag started with five comrades; all dropped, but he alone came bounding forward to within 200 yards of the 14th Sudanese. Then he folded his arms across his face, and his limbs loosened, and he dropped sprawling to earth beside his flag. *The persistent charges.*

It was the last day of Mahdism, and the greatest. They could never get near, and they refused to hold back. By now the ground before us was all white with dead men's drapery. Rifles grew red-hot; the soldiers seized them by the slings and dragged them back to the reserve to change for cool ones. It was not a battle, but an execution. *The slaughter.*

In the middle of it all you were surprised to find that we were losing men.

But loss on this scale was not to be considered beside the awful slaughter of the Dervishes. If they still came on our men needed only time and ammunition and strength to point a rifle to kill them off to the very last man. Only by now—small wonder—they were not coming on. They were not driven back; they were all killed in coming on. One section of fire after another hushed, and at eight o'clock the village and the plain were still again. The last shell had burst over the last visible group of Dervishes; now there was nothing but the unbend-

ing, grimly expectant line before Agaiga and the still carpet of white in front.

*Advance to  
Omdur-  
man.*

We waited half an hour or so, and then the sudden bugle called us to our feet. "Advance," it cried; "to Omdurman!" added we. Slowly the force broke up, and expanded.

*The dead  
Baggara.*

Movement was slow, since the leading brigades had to wait till the others had gone far enough inland to take their positions. We passed over a corner of the field of fire, and saw for certain what awful slaughter we had done. The bodies were not in heaps—bodies hardly ever are; but they spread evenly over acres and acres. And it was very remarkable, if you remembered the Atbara, that you saw hardly a black; nearly all the dead had the high forehead and taper cheeks of the Arab. The Baggara had been met at last, and he was worth meeting. Some lay very composedly, with their slippers placed under their heads for a last pillow; some knelt, cut short in the middle of a last prayer. Others were torn to pieces, vermilion blood already drying on brown skin, killed instantly beyond doubt. Others, again, seemingly as dead as these, sprang up as we approached, and rushed savagely, hurling spears at the nearest enemy. They were bayoneted or shot. Once again the plain seemed empty, but for the advancing masses and the carpet of reddened white and broken bodies underfoot.

It was now twenty minutes to ten. The British had crested a low ridge between Gebel Surgham and the

Nile; Maxwell's brigade was just ascending it, Lewis's just coming up under the hill. Men who could go where they liked were up with the British, staring hungrily at Omdurman. Suddenly from rearward broke out a heavy crackle of fire. We thought perhaps a dozen men or so had been shamming dead; we went on staring at Omdurman. But next instant we had to turn and gallop hot-heeled back again. For the crackle became a crashing, and the crashing waxed to a roar. Dervishes were firing at us from the top of Gebel Surgham. Dervishes were firing behind and to the right of it. The 13th Sudanese were bounding up the hill; Lewis's brigade had hastily faced to its right westward, and was volleying for life; Macdonald's beyond, still facing northward, was a sheet of flashes and a roll of smoke. What was it? Had they come to life again? No time to ask; reinforcements or ghosts, they were on us, and the battle was begun all again.

*The second attack.*

*Renewal of the battle.*

To understand, you must hear now what we only heard afterward. The Dervish army, it appeared, had not returned to Omdurman on the night of the 1st, but had bivouacked—40,000 to 50,000 of them—behind Gebel Surgham, southwestward from Agaiga. The Khalifa had doubtless expected a sudden attack at daybreak, as at Firket, at Abu Hamed, on the Atbara; as we marched by night to our positions before Omdurman he must have designed to spring upon our right flank. When day broke and no enemy appeared he divided his army into

*The Khalifa divides his army.*

three corps. The first, under Osman Azrak, attacked the village; the second, with the green banner of Ali Wad Helu—with him Abdullahi's eldest son, the Sheik-ed-Din—moved toward Kerreri Heights to envelop our right; the third, under Abdullahi himself and his brother Yakub, remained behind Surgham, ready, as need might be, to envelop our left, or to act as reserve and bar our road to Omdurman.

*Broadwood  
in diffi-  
culties.*

What befell the first you know; Osman Azrak died with them. The second spread out toward our right, and there it fell in with the Egyptian cavalry, horse-battery, and camel-corps. When Broadwood Bey fell back before the attack, he sent word of its coming to the Sirdar, and received orders to remain outside the trench and keep the enemy in front, instead of letting them get round the right. Accordingly, he occupied the Heights of Kerreri. But the moment he got to the top he found himself in face of Wad Helu's unsuspected army-corps—12,000 to 15,000 men against less than 2,000—and the moment he saw them they began swarming up the hill. There was just a moment for decision, but one moment is all that a born cavalry general needs. The next his galloper was flying with the news to the Sirdar, and the mounted troops were retreating northward. The choice lay between isolation, annihilation, or retreat on Agaiga and envelopment of the right. Broadwood choose the first, but even for that the time was short enough. The camels floundered on the rocky hillside; the guns dragged; the

whole mass of Dervishes pursued them with a pelting fire. Two guns lost all their horses and were abandoned; the camel-corps alone had over sixty men hit. As for the cavalry, they went back very hard pressed, covering their comrades' retreat and their own by carbine fire. If the Egyptian army but gave Victoria Crosses, there were many earned that day. Man after man rode back to bring in dismounted officers, and would hardly be dissuaded from their endeavor when it was seen the rescued were plainly dead. It was the great day of trial—the day the pick of our cavalry officers had worked for through a weary decade and more—and the Fayum fellah fought like a hero and died like a man. One or two short of forty killed and wounded was the day's loss; but they came off handsomely. The army of the green flag was now on Kerreri Heights, between them and the camp; but with Broadwood's force unbroken behind it, it paused from the meditated attack on the Egyptian right. In the pause, three of the five gunboats caught it, and pepper-castered it over with shell and Maxim fire. It withdrew from the river toward the centre again: the instant a way was cleared the out-paced camel-corps was passed back to Agaiga. The cavalry hung upon the green flag's left, till they withdrew clean westward and inland; then it moved placidly back to the infantry again.

*British  
losses.*

*Gallantry  
of the  
Fayum  
fellahs.*

Thus much for the right; on the left the British cavalry were in the stress of an engagement, less perfectly conducted, even more hardily fought out. They left the

*Advance of  
the cavalry.*

zariba the moment the attack burned out, and pricked eagerly off to Omdurman. Verging somewhat westward, to the rear of Gebel Surgham, they came on 300 Der-vishes. Their scouts had been over the ground a thousand yards ahead of them, and it was clear for a charge. Only to cut them off it was thought better to get a little west of them, then left wheel, and thus gallop down on them and drive them away from their supports. The trumpets sang out the order, the troops glided into squadrons, and, four squadrons in line, the 21st Lancers swung into their first charge.

*The  
Lancers'  
charge.*

Knee to knee they swept on till they were but 200 yards from the enemy. Then suddenly—then in a flash—they saw the trap. Between them and the 300 there yawned suddenly a deep ravine; out of the ravine there sprang instantly a cloud of dark heads and a brandished lightning of swords, and a thunder of savage voices. Mahmud smiled when he heard the tale in prison at Halfa, and said it was their favorite stratagem. It had succeeded. Three thousand, if there was one, to a short four hundred; but it was too late to check now. Must go through with it now! The blunders of British cavalry are the fertile seed of British glory: knee to knee the Lancers whirled on. One hundred yards—fifty—knee to knee—

*The Der-  
vish trap.*

Slap! "It was just like that," said a captain, bringing his fist hard into his open palm. Through the swordsmen they shone without checking—and then came the

khorr. The colonel at their head, riding straight through everything without sword or revolver drawn, found his horse on its head, and the swords swooping about his own. He got the charger up again, and rode on straight, unarmed, through everything. The squadrons followed him down the fall. Horses plunged, blundered, recovered, fell; Dervishes on the ground lay for the hamstringing cut; officers pistolled them in passing over, as one drops a stone into a bucket; troopers thrust till lances broke, then cut; everybody went on straight, through everything.

And through everything clean out the other side they came—those that kept up or got up in time. The others were on the ground—in pieces by now, for the cruel swords shore through shoulder and thigh, and carved the dead into fillets. Twenty-four of these, and of those that came out over fifty had felt sword or bullet or spear.

Forbearing a second charge, the Lancers dismounted and opened fire; the carbines at short range took an opulent vengeance for the lost. Back, back, back they drove them, till they came into the fire of the 32d Battery. The shrapnel flew shrieking over them; the 3,000 fell all ways, and died.

*Death of  
the 3,000.*

All this from hearsay; now to go back to what we saw. When the Sirdar moved his brigades southward he knew what he was doing. He was giving his right to an unbeaten enemy; with his usual daring he made it so. His game now was to get between the Dervishes and Om-

durman. Perhaps he did not guess what a bellyful of beating the unbeaten enemy would take; but he trusted to his generals and his star, and, as always, they bore him to victory.

*The  
Baggara  
horsemen.*

The blacks of the 13th Battalion were storming Gebel Surgham. Lewis and Macdonald, facing west and south, had formed a right angle. They were receiving the fire of the Khalifa's division, and the charge of the Khalifa's horsemen; behind these the Khalifa's huge black standard was flapping raven-like. The Baggara horsemen were few and ill-mounted—perhaps 200 altogether—but they rode to get home or die. They died. There was a time when one galloping Beggara would have chased a thousand Egyptians, but that time is very long past. The fellaheen stood like a wall, and aimed steadily at the word; the chargers swerved toward Macdonald. The blacks, as cool as any Scotsmen, stood and aimed likewise; the last Baggara fell at the muzzles of the rifles. Our fire went on, steady, remorseless. The Remington bullets piped more and more rarely overhead, and the black heads thinned out in front. A second time the attack guttered and flickered out. It was just past ten. Once more to Omdurman!

*The third  
attack.*

Two minutes' silence. Then once more the howling storm rushed down upon us; once more crashed forth the answering tempest. This time it burst upon Macdonald alone—from the northwestward upon his right flank, spreading and gathering to his right rear. For all



their sudden swiftness of movements the Dervishes throughout this day never lost their formation; their lines drove on as rigidly as ours, regiment alongside regiment in lines of six and eight and a dozen ranks, till you might have fancied the Macedonian phalanx was alive again. Left and front and right and rear the masses ate up the desert—12,000 unbroken fast and fearless warriors leaping round 3,000.

Now began the fiercest fight of that fierce day. The Khalifa brought up his own black banner again; his stanchest die-hards drove it into the earth and locked their ranks about it. The green flag danced encouragement to the Allah-intoxicated battalions of Wad Helu and the Sheik-el-Din. It was victory or Paradise now. *Victory or Paradise.*

For us it was victory or shredded flesh and bones unburied, crackling under the red slippers of Baggara victors. It was the very crux and crisis of the fight. If Macdonald went, Lewis on his left and Collinson and the supporting camel-corps and the newly returned cavalry, all on his right or rear, must all go too. The Second British and Second Egyptian Brigades were far off by now, advancing by the left of Surgham hill; if they had to be recalled the Khalifa could walk back into his stronghold, and then all our fighting was to begin anew. But Hunter Pacha was there and Macdonald Bey was there, born fighting men both, whom no danger can flurry and no sudden shift in the kaleidoscope of battle disconcert. Hunter sent for Wauchope's first British *Macdonald's peril.*

Brigade to fill the gap between Macdonald and Lewis. The order went to General Gatacre first instead of the Sirdar: with the soldier's instinct he set the brigade moving on the instant. The khaki columns faced round and edged rightward, rightward till the fighting line was backed with 3,000 Lee-Metfords, which no man on earth could face and live. Later the Lincolns were moved further still on to Macdonald's right. They dispute with the Warwicks the title of the best-shooting regiment in the British army; the men they shot at will dispute no claim of the Lincolns forever.

*His  
masterly  
tactics.*

But the cockpit of the fight was Macdonald's. The British might avenge his brigade; it was his to keep it and to kill off the attack. To meet it he turned his front through a complete half-circle, facing successively south, west, and north. Every tactician in the army was delirious in his praise: the ignorant correspondent was content to watch the man and his blacks. "Cool as on parade," is an old phrase; Macdonald Bey was very much cooler. Beneath the strong, square-hewn face you could tell that the brain was working as if packed in ice. He sat solid on his horse, and bent his black brows toward the green flag and the Remingtons. Then he turned to a galloper with an order, and cantered easily up to a battalion-commander. Magically the rifles hushed, the stinging powder smoke wisped away, and the companies were rapidly threading back and forward, round and round, in and out, as if it were a figure of a

dance. In two minutes the brigade was together again in a new place. The field in front was hastening toward us in a whity-brown cloud of Dervishes. An order. MacDonald's jaws gripped and hardened as the flame spurted out again, and the whity-brown cloud quivered and stood still. He saw everything; knew what to do; knew how to do it; did it. At the fire he was ever brooding watchfully behind his firing-line; at the cease fire he was instantly in front of it: all saw him, and knew that they were being nursed to triumph.

*The gal-  
lant black  
brigade.*

His blacks of the 9th, 10th, and 11th, the historic fighting regiments of the Egyptian army, were worthy of their chief. The 2d Egyptian, brigaded with them and fighting in the line, were worthy of their comrades, and of their own reputation as the best disciplined battalion in the world. A few had feared that the blacks would be too forward, the yellows too backward: except that the blacks, as always, looked happier, there was no difference at all between them. The Egyptians sprang to the advance at the bugle; the Sudanese ceased fire in an instant silence at the whistle. They were losing men, too, for though eyes were clamped on the Dervish charges, the Dervish fire was brisk. Man after man dropped out behind the firing line. Here was a white officer with a red-lathered charger; there a black stretched straight, bare-headed in the sun, dry-lipped, uncomplaining, a bullet through his liver; two yards away a dead driver by a dead battery mule, his whip still glued in his hand.

*Egyptian  
losses.*

The table of loss topped 100—150—neared 200. Still they stood, fired, advanced, fired, changed front, fired—firing, firing always, deaf in the din, blind in the smarting smoke, hot, dry, bleeding, blood-thirsty, enduring the devilish fight to the end.

*Heroism  
of the  
Dervishes.*

And the Dervishes? The honor of the fight must still go with the men who died. Our men were perfect, but the Dervishes were superb—beyond perfection. It was their largest, best, and bravest army that ever fought against us for Mahdism, and it died worthily of the huge empire that Mahdism won and kept so long. Their riflemen, mangled by every kind of death and torment that man can devise, clung round the black flag and the green, emptying their poor, rotten, home-made cartridges dauntlessly. Their spearmen charged death every minute hopelessly. Their horsemen led each attack, riding into the bullets till nothing was left but three horses trotting up to our line, heads down, saying, "For goodness' sake, let us in out of this." Not one rush, or two, or ten—but rush on rush, company on company, never stopping, though all their view that was not unshaken enemy was the bodies of the men who had rushed before them. A dusky line got up and stormed forward: it bent, broke up, fell apart, and disappeared. Before the smoke had cleared, another line was bending and storming forward in the same track.

*Flight of  
the Khalifa.*

It was over. The avenging squadrons of the Egyptian cavalry swept over the field. The Khalifa and the Sheik-



DEWEY ON THE BRIDGE IN THE BATTLE OF MANILA BAY (LIC 235 245)

FROM A DRAWING —EROWN PHOTOGRAPH



ed-Din had galloped back to Omdurman. Ali Wad Helu was borne away on an angareb with a bullet through his thigh-bone. Yakub lay dead under his brother's banner. From the green army there now came only death-enamored desperadoes, strolling one by one toward the rifles, pausing to shake a spear, turning aside to recognize a corpse, then, caught by a sudden jet of fury, bounding forward, checking, sinking limply to the ground. Now under the black flag in a ring of bodies stood only three men, facing the three thousand of the Third Brigade. They folded their arms about the staff and gazed steadily forward. Two fell. The last Dervish stood up and filled his chest; he shouted the name of his God and hurled his spear. Then he stood quite still, waiting. It took him full; he quivered, gave at the knees, and toppled with his head on his arms and his face toward the legions of his conquerors.

*The last  
Dervish.*





# THE BATTLE OF MANILA BAY

(A.D. 1898)

WILLIS JOHN ABBOT

WHEN the battle was fought the first hour showed the immense superiority of the Americans in everything that goes to win victory; but as Commodore Dewey led his fleet along the coast of Luzon toward the harbor where he knew the enemy lay in waiting, he had nothing to expect but a desperate battle with a fleet not greatly his inferior. It must be remembered, that the Spanish ships were anchored in a harbor protected by shore batteries. To get at them the Americans had to pass down a channel guarded on either side by powerful forts armed with modern rifles. The harbor to be traversed before reaching the enemy was sixteen miles long, and it was only to be expected that it was plentifully besprinkled with mines. *Superiority of the Americans.*

One seems to read in Dewey's first decision the effects of his training under the great Admiral Farragut. His fleet arrived off the mouth of Manila Bay at night. *Arrival of the fleet.*

*Entering  
the bay.*

There was no stop to reconnoitre, no suggestion of "bottling up" the enemy after the Santiago fashion, no waiting until daylight might make it easier to run the gantlet of mines and batteries, no delay of any kind, but a quiet and immediate attack on the enemy. Only a brief wait for the moon to set, and then on, in single file, the *Olympia* leading, the *McCulloch* bringing up the rear, with all lights out except one lantern at the stern of each ship for the next to steer by. Seemingly, the Spaniards had no idea that an enemy was at their door. The great light that marked the entrance to the harbor gleamed as though to welcome the grim procession of ghostly gray ships stealing unaware upon their prey. The forts were as silent as though all defenders were dead. To the men on the ships it seemed that their progress was attended with the tumult of a thousand railroad trains. They walked with muffled tread and spoke in whispers lest Spaniards miles away might hear them, and marvelled that the rush of the vessels through the water and the white foam breaking away from the cleaving prows did not attract the attention of the enemy. Yet there came no sound of cannon, nor did any mine rend the plates of any stout ship. The last ship of the column, the *McCulloch*, gave the first alarm. From its smoke-stack, when coal was flung on the furnaces below, there flared up a red flame lighting up the waters and the rigging of the ships ahead. All turned expectantly toward the batteries in anticipation of a shot, but no

sound came. Again the unlucky beacon flared, and again, and after the third illumination the darkness to starboard was pierced by the flash of a gun on a rock called El Fraile. The shell went wild, and the *Concord* responded with the fierce bellow of a 6-inch gun. There was no longer any attempt at secrecy, and cannon roared from the *Boston*, the *McCulloch*, and the *Concord*, the big ships at the head of the line passing on in silent dignity. The shot from El Fraile had done much more good than harm. It gave to the commodore, who with a Filipino insurgent by his side stood on the bridge of the *Olympia* piloting in the fleet, a clear idea of how the shore lay. That battery once passed, all the defences of the harbor's mouth were left behind, and there was nothing more to apprehend until the city, with its forts at Cavite, was reached—nothing, that is, except mines, against which no skill could avail and which might therefore be ignored. So the ships steamed sullenly on up the bay, the tension measurably lessened by the little spurt of fire, but with every man alert for the next development of the morning—for by this time the sudden dawn of the tropics was breaking.

*The first shot.*

*Dawn breaks.*

The swift coming of day discovered to the eager gazers from the American ships not only the old town of Manila, with its clustering low roofs and towering cathedral, but a sight which they had come all this way to see—the Spanish fleet—ten great ships with military tops showing across a low neck of land—lying at anchor

*The Spanish fleet.*

under the batteries at Cavite, a suburb of the city where the navy yard, arsenal, and other military and naval establishments were placed. There was silence on the ships as the stirring spectacle was presented, and the men, many of whom had slept on the run in from the harbor's mouth, crowded to the points of vantage to gaze on it. With a glass, the roofs and quays of the city could be seen to be crowded with spectators; so it was evident that the short engagement with the battery at El Fraile had alarmed the city. As the men gazed, others passed up and down the decks of the men-of-war, distributing cups of hot coffee and biscuit, by orders of the commodore, who had no intention of having his sailors go into action hungry. The plan of the battle had been worked out already, and only a few signals from the flagship were necessary to place the fleet in the formation agreed on. As the signals fluttered from the gaff, black balls mounted to every peak on all the vessels, and breaking out, displayed the great battle-flags. At that the enemy growled out a word of warning with the 9-inch guns of Fort Lunetta, and the attacking column moved sullenly on to closer quarters. "Hold your fire," was the word passed on from the flagship, and save for two shots from the *Concord* no answer was made to the forts. Onward toward the Spanish fleet, which was maintaining a like silence, the fleet sped. A sudden muffled roar and a great volume of mud and water springing into the air right before the flagship told that the dreaded mines

*Breakfast  
is served.*

*"Hold  
your fire."*

were near, and in an instant another exploded. Neither did any hurt, and with the explosion of the two the Spanish resources of that sort seemed to be exhausted. By this time the fleet was approaching the enemy nearly. On the bridge of the *Olympia* stood Commodore Dewey, Captain Gridley and Flag-Captain Lambert at his side. Though the Spanish ships now joined the forts in pouring a fire on the advancing foe, there was still no response. Just as the sun rose, red and glaring with midsummer heat, the commodore turned to the officer at his side and said, quietly, "You may fire now, Gridley, when ready." Gridley was ready, and almost on the instant an 8-inch shell hurtled out through the yellow smoke toward the enemy, now about 4,500 yards away. Presently a signal from the flagship conveyed to all the vessels a like permission, and the whole fleet was soon engaged.

*Opening of  
the action.*

On the flagship, before opening action, Dewey had assembled his men and given them this final word: "Keep perfectly cool, and pay attention to nothing but orders." This was the watchword throughout the American fleet that morning, and, as the result, the fire was deliberate and deadly. The column—*Olympia, Baltimore, Raleigh, Petrel, Concord, and Boston*, in the order named—steamed along parallel to the Spanish ships, working every gun that could be brought to bear, and receiving the fire of ships and forts in return. The fire of the enemy was, as Dewey put it in his report, "vigor-

*Vigorous  
but ineffective  
fire.*

*An  
apparent  
retreat.*

ous, but generally ineffective." Down past the Spanish line the squadron moved, the port side of every ship a mass of flame and smoke, then circling around in a grand sweep—that made the Spaniards think for a moment they were pulling out of action—the column returned again on its course, and the men of the starboard batteries had a chance to try their skill while their fellows rested. Each turn brought them nearer the enemy; each broadside found the American gunnery improving. Five times the circuit was made, and then a signal fluttered from the yard of the *Olympia*, and the fleet turned away to the other side of the harbor, where the *McCulloch* and the coilers had been lying. The Spaniards raised a resounding cheer at the sight of what they supposed to be a retreat, and a telegram was instantly sent off, that the enemy had been compelled to haul off for repairs. A misinterpreted signal had caused the commodore to believe that ammunition for the 5-inch guns was running short, and as the smoke made it difficult, if not impossible, to ask each ship-captain by signal how much he had, it was determined to haul off and redistribute the ammunition if it were required. In the end, however, no necessity was found for this, and as there was time then for breakfast, the meal was served.

*Heavy  
Spanish  
losses.*

In the portion of the engagement prior to the intermission, the "first round," it might be called, the Spaniards had suffered heavily. The American fire had been both rapid and accurate. With the glasses, the shots

could be seen striking the thin iron hulls of the Spanish ships, and by the time the third circuit had been made three were in flames. Stung into fury by the losses inflicted on his squadron, Admiral Montojo, just as the Americans were turning to begin their third circuit, slipped the cables of his flagship, and under full steam darted out as if with the intention of ramming the *Olympia*, or at any rate coming to close quarters. The dash was magnificent, but it was futile. As the *Reina Cristina* swung away from her fellows, the fire of the whole American fleet was concentrated upon her. As she clung stubbornly to her course, the storm of projectiles swept down upon her, pierced her hull like paper, swept her decks, and, bursting, spread death and fire on every side. Her bridge was shot away, her engines wounded. Superhuman gallantry could bear the punishment no longer, and, responding with difficulty to her helm, she turned to seek her former position. Just as her stern was presented to the American fire, an 8-inch gun on the *Olympia* was trained upon her, and its projectile sped forth on a murderous errand. It struck the Spaniard full in the stern, tore its way forward, killing men, shattering guns, exploding ammunition, piercing partitions and tearing up decks, until it exploded in her after-boiler. The wound was mortal. With flames leaping from her hatches, and the shrill screams of agonized men rising above the thunder of the battle, the *Reina Cristina* staggered back.

*The Reina  
Cristina's  
attack.*

*Destruction of the torpedo-boats.*

men lay dead, and nearly a hundred wounded,—most of them sacrificed in Montojo's gallant effort to rush the American flagship. Another heavy loss fell upon the Spaniards while this act in the drama of battle was progressing. Thinking, no doubt, that the attention of the *Olympia* would be wholly centred upon the *Cristina*, the two Spanish torpedo boats slipped out, and made a run for the American fleet. One headed for the supply-ships, but was caught by the *Petrel*, which first drove her ashore, and then pounded her with rapid-fire guns until she blew up. The other, advancing on the *Olympia*, was struck amidships by a shell, broke in two, and disappeared like a broken bottle. So at Manila, as later at Santiago, it was demonstrated that torpedo boats are not the dangerous engines of war that had been thought,—at least not when they are in Spanish hands.

*Three hours' intermission.*

Three hours' intermission was taken by the American sailors after that first round. A leisurely breakfast, a critical examination of all guns and machinery that had been under strain, and the work of preparing an ample supply of fresh ammunition occupied the time. Then out fluttered the signals again, the crews went to their quarters, the great screws began to revolve, and once more the fighting ships bore down upon the unhappy enemy. Again the fleet revolved in a great circle of smoke and fire, though at closer range than before. The Spaniards, whose hopes had been roused by the stoppage of the action, were demoralized by its renewal. Their



fire was wild, their resistance half-hearted. The *Reina Cristina*—no longer the flagship, for Montojo had transferred his flag to the *Isla de Cuba*—was blown up by the shells of the *Baltimore*. After her, speedily followed the *Don Juan de Austria*, her *coup de grâce* being administered by the *Raleigh*. The little *Petrel* ran into the shoal water and set fire to the *El Correo*, the *Marques del Duero*, the *Don Juan de Austria*, *Isla de Luzon*, *Isla de Cuba*, and *General Lezo*, all of which had been disabled by the fire of the fleet, and most of which had been run ashore after surrendering. Admiral Montojo with great gallantry fought his second flagship until her guns were silenced and the flames were making her decks untenable. Then he abandoned her to her fate and escaped to the city, whence, it is said, a great concourse of people had come out that morning to see the “pigs of Yankees” annihilated. Finally the *Don Antonio de Ulloa*, the last ship left fighting, sunk with her flag still nailed to her mast, and a well-placed shot entered the magazine at Cavite, ending the resistance of the shore batteries. Then the signal was flung out from the flagship, “The enemy has surrendered.” The hot, weary, and smoke-begrimed men swarmed cheering out of turrets and up from the bowels of the ships, the flagship’s band broke out with *The Star-Spangled Banner*, and the victory of Manila, the first victory in the war with Spain, was won. And at how light a cost!

*Montojo transfers his flag.*

*The last ship sinks*

As each captain came over the *Olympia’s* side, he re-

*The cheap  
victory.*

plied to the eager query, "How many killed?" in a manner that indicated a very much mixed state of mind. Mingled with satisfaction at having lost no man was an evident desire to have it understood that the lack of loss was no proof of an absence of danger.

"Only eight wounded," replied Captain Dyer of the *Baltimore*—"none seriously. But six shells struck us, and two burst inboard without hurting any one."

"Not a dashed one!" was the rollicking way the next captain reported.

"None killed and none wounded," was the apologetic reply of the next one; "but I don't yet know how it happened. I suppose you fellows were all cut up!"

"My ship wasn't hit at all," was the next report, made with a sort of defiant air, as if the speaker would like to hear it insinuated that he had had any part in keeping his men in a safe place.

When the *Boston's* captain came alongside it was feared that he for certain would have a serious list of casualties, for it was known that his ship had been on fire. And when he announced neither killed nor wounded, the news quickly spread through the flagship, and the men cheered vociferously.

*Spanish  
losses.*

For the Spaniards there was no such immunity as attended the Americans. No miracles interposed between them and the American shells, perhaps because the latter were more skilfully directed. The exact losses in Admiral Montojo's squadron are not known. His ten ships

and two torpedo boats were totally destroyed, and the report of General Augustin, the Governor-General, put the number of killed and wounded at about 618, though there is reason to believe it was nearer a thousand.

[In 1899, Captain Dreyfus obtains a second trial; he is again condemned but pardoned. The Peace Conference meets at The Hague. Spain sells her remaining Pacific possessions to Germany. The Khalifa is killed on the White Nile. The Crown buys up the Niger Company. The disputes between the Boers and Uitlanders, whose demands are backed by Great Britain, culminate in war. The Boers enter Natal and besiege Mafeking and Kimberley. The Boers are defeated at Glencoe and Elandslaagte, but win at Nicholson's Nek and surround Ladysmith. Methuen and Gatacre both receive severe checks, and Buller is routed at Colenso. Roberts is appointed to the chief command with Kitchener as second. Marconi experiments with wireless telegraphy.]

*The Boer  
war.*



# THE PEACE CONFERENCE

(A.D. 1899)

ELEONORE D'ESTERRE-KEELING

"We are making a page of history; let us see to it that we make it well!"

THESE words were spoken lately by one of the ninety-eight delegates who, sent by twenty-six States, met at The Hague on May 18 to form the greatest Conference of the century, and the speaker nowise overestimated the importance of his mission. That page of history, which he helped to make, might be written in letters of gold. *A page of history.*

For the last quarter of a century the nations of the world have been devoting all their ingenuity to the invention and perfection of means of destruction, with the result that a point at last was reached which meant that the next great war must terminate in the ruin of one combatant and the annihilation of the other.

Such a state of things was more than the most belligerent of Powers could contemplate with equanimity.

Where was it all to end, and who would be the first to cry, "Hold—enough!"

The answer came from the least expected quarter.

*The Tsar's  
Rescript.*

The foreign ambassadors to the Court of St. Petersburg, when paying their weekly visit, on August 28 of last year, were handed by Count Muravieff, the Minister for Foreign Affairs, a printed document which caused them no little surprise. This document has since become famous as the Tsar's Rescript. It contained an invitation to all the Powers who were represented in the Russian capital to hold a Conference to discuss the possibility of putting "some limit to the increasing armaments, and to find a means of averting the calamities which threaten the whole world." At the same time the Tsar's circular pointed out that—

"The ever-increasing financial burdens attack public prosperity at its very roots. The physical and intellectual strength of the people, labor and capital are diverted for the greater part from their natural application and wasted unproductively. Hundreds of millions are spent to obtain frightful weapons of destruction, which, while being regarded to-day as the latest inventions of science, are destined to-morrow to be rendered obsolete by some new discovery. National culture, economical progress, and the production of wealth are either paralyzed or turned into false channels of development. Therefore the more the armaments of each Power increase, the less they answer to the purposes and intentions of the Gov-

ernments. Economic disturbances are caused in great measure by this system of extraordinary armaments, and the danger lying in the accumulation of war material renders the armed peace of to-day a crushing burden more and more difficult to bear."

Of the Conference which he proposed should be held, the Tsar went on to say:

"It would be a happy augury for the opening century. It would powerfully concentrate the efforts of all States which sincerely wish to see the triumph of the grand idea of universal peace over the elements of trouble and discord."

This paper was printed in the *Times* of August 29, 1898, and a comment upon it in a leader of the same journal is worth quoting:

*The com-  
ment of the  
London  
Times.*

"The state paper which Count Muravieff, by direct order of the Tsar, has addressed to the representatives of the Powers accredited to the Court of St. Petersburg, is a very remarkable and most unexpected document. On the eve of inaugurating a memorial to his grandfather as the Tsar Liberator, the present Autocrat of all the Russias seizes the opportunity to appeal to the civilized world in the still more lofty capacity of the Tsar Peacemaker. Count Muravieff's note, in which the views and aspirations of his master are expounded, breathes a spirit of generous—perhaps, indeed, of almost quixotic—humanity, a spirit with which we have long been familiar in the effusions of visionaries and enthu-

siasts, but have been too seldom privileged to find in the utterances of great sovereigns and responsible statesmen. Never perhaps in modern history have the aspirations which good men in all ages have regarded as at once ideal and unattainable found so responsive an echo in the counsels of one of the greatest and most powerful of the world's rulers."

*The  
second  
circular.*

The States to which the Rescript had been addressed having respectfully, if incredulously, expressed their desire for further information as to the proposed Conference, on January 11, Count Muravieff sent out a second circular, in which the points to be discussed were placed under eight headings, as follows:

*Special  
points for  
consideration.*

"1. An agreement not to increase military and naval forces for a fixed period; also not to increase the corresponding War Budgets; to endeavor to find means for reducing these forces and their Budgets in the future.

"2. To interdict the use of any kind of new weapon or explosive, or any new powder more powerful than that which is at present in use for rifles and cannon.

"3. To restrict the use in war of existing explosives of terrible force, and also to forbid the throwing of any kind of explosives from balloons or by any analogous means.

"4. To forbid the use of submarine torpedo boats or plungers, and any other similar engines of destruction, in naval warfare; to undertake not to construct vessels with rams.



"5. To apply to naval warfare the stipulations of the Geneva Convention of 1864.

"6. The neutralization of ships and boats for saving those shipwrecked during and after naval battles.

"7. The revision of the Declaration concerning the laws and customs of war elaborated in 1874 by the Conference of Brussels, which remains unratified to this day.

"8. To accept in principle the employment of good offices in mediation and optional arbitration in cases which lend themselves to such means in order to prevent armed conflict between nations; an understanding on the subject of their mode of application and the establishment of some uniform practice in making use of them."

On January 17, the *Times* in a leading article expressed its opinion of this development as follows:

"This document in a certain measure meets the wish expressed by Lord Salisbury in his despatch of October 24, for 'some indication of the special points to which the attention of the Conference is to be directed.' We now know what these points are to be, and the knowledge, we are afraid, can but confirm the view generally held by men of sense and experience in affairs as to the Utopian character of the whole design."

*General  
criticism  
of the  
Rescript.*

The opinion of the *Times* was by no means singular. The Tsar's proposal was discussed all over the civilized world, and everywhere the unpractical character of the

scheme was condemned. Very much of the doubt inspired by it was due to the over-emphasis given in men's minds to point 1, which deals with the restriction of armaments. Had Count Muravieff's circular consisted of this point alone the failure of the proposed Conference would have been a foregone conclusion, but the other seven points offered a more hopeful prospect, and to them the success of the undertaking is wholly due.

*The  
"House in  
the Wood."*

With misgivings in their hearts, the delegates at length met at The Hague, where they were welcomed by the young Queen of the Netherlands, who placed at their disposal her beautiful summer palace, known as the "House in the Wood."

A more favorable spot could scarcely have been chosen for deliberations which were destined to last over two months in the hottest part of the year. For the English, French, and German delegates, The Hague is as convenient a meeting-place as could well be devised, and the close proximity of Scheveningen, one of the most delightful of seaside watering-places, enabled the delegates to combine the pleasantest of holidays with the execution of their business duties. Many of the members were accompanied by their families, and what with receptions by Queen Wilhelmina, and entertainments at the British Embassy, the Kurhaus at Scheveningen, and the temporary residences of the leaders of the Conference, ample provision was made against the dullness

which is proverbially known to accompany all work and no play.

The situation indeed was so novel, and so little was expected to come of the proposed deliberations, that we can scarcely wonder at the question put by an American paper to one of its Dutch correspondents: "Is the Conference at The Hague anything else than a huge international junketing picnic party?"

*Novelty  
of the  
situation.*

Slowly, but surely, things began to take shape. It was seen that the Tsar's proposal, far from being confined to disarmament, was based on three distinct ideas, which might be roughly classed as the Means of War, the Horrors of War, and the Prevention of War. Strange to say, only one of the eight points in the Muravieff circular, and that the last one, concerned itself with the prevention of war. As soon as this fact had become clear to the delegates to The Hague, they began to see their way. Their work was then divided into three sections. To the first section was given the discussion of points 1 to 4 of the Muravieff circular, dealing with armaments; and this section was again divided into two sub-sections—military and naval—the President being M. Beernaert, the Belgian Minister of Finance and President of the Chamber.

*Division of  
the work.*

*The chief  
officers.*

The second section undertook points 3 to 7, which referred to Rules of War, and here again two sub-sections devoted themselves respectively to the consideration of the Geneva Convention and of the Brussels Confer-

ence. M. Martens was nominated President of this section, and a better choice could not have been made. M. Martens is a Russian and a great linguist. He is an experienced diplomatist, and his knowledge of international law is so profound as to have gained for him the title of Chief-Justice of Europe. The third section, to which the important last clause of the Muravieff circular was confided, has considered the possibilities of Arbitration. The difficult and delicate position of President of this section was conferred on M. Bourgeois, the ex-Prime Minister of France; the Hon. Presidents being Sir Julian Pauncefote and Count Nigra, the chief Italian delegate.

The President of the whole Conference was M. de Staal, who has been Russian Ambassador to the Court of St. James's since 1884.

*The final document.*

The *Acte final* was drawn up and presented to the delegates just before the last sitting, on July 29. Its principal contents are the three conventions relating to Arbitration (which here comes first), to the Rules of War, and to the Geneva Convention. The first of these was signed at once by sixteen States; those which abstained from signing being Germany, Austria-Hungary, China, Great Britain, Italy, Japan, Luxemburg, Servia, Switzerland, and Turkey. The second and third Conventions were signed by fifteen States, the abstentions being the same as in the preceding case, with the addition of Portugal.

The delegates parted with mutual expressions of en-

A.D. 1899

## THE PEACE CONFERENCE

couragement and goodwill, M. de Staal, as President of the Conference, concluding his last speech with the words: "For myself, who have arrived at the term of my career and decline of my life, I consider it as a supreme consolation to have been able to witness the advent of new prospects for the welfare of humanity, and to have been able to cast a glance into the brightness of the future."

*The  
President's  
farewell  
address.*



# THE BATTLE OF ELANDSLAAGTE

(A.D. 1899)

G. W. STEEVENS

FROM a billow of the rolling veldt we looked back, and black columns were coming up behind us.

Along the road from Ladysmith moved cavalry and guns. Along the railway line to right of it crept trains—*Advance of the columns.* one, two, three of them—packed with khaki, bristling with the rifles of infantry. We knew that we should fight before nightfall.

Major-General French, who commanded, had been out from before daybreak with the Imperial Light Horse and the battery of the Natal Volunteer Artillery reconnoitring toward Elandslaagte. The armored train—*The armored train.* slate-color plated engine, a slate-color plated loop-holed cattle-truck before and behind an open truck with a Maxim at the tail of all—puffed along on his right. Elandslaagte is a little village and railway station seventeen miles northeast of Ladysmith, where two days before the Boers had blown up a culvert and captured a train. That cut our direct communication with the force at Dundee.

Moreover, it was known that the Free State commandoes were massing to the northwest of Ladysmith and the Transvaalers to attack Dundee again. On all grounds it was desirable to smash the Elandslaagte lot while they were still weak and alone.

*The reconnaissance.*

The reconnaissance stole forward until it came in sight of the little blue-roofed village and the little red, tree-girt station. It was occupied. The Natal battery unlimbered and opened fire. A round or two—and then suddenly came a flash from a kopje two thousand yards beyond the station on the right. The Boer guns! And the next thing was the hissing shriek of a shell—and plump it dropped, just under one of the Natal limbers. By luck it did not burst; but if the Boer ammunition contractor was suspect, it was plain that the Boer artillerist could lay a gun. Plump: plump: they came right into the battery; down went a horse; over went an ammunition-wagon. At that range the Volunteers' little, old 7-pounders were peashooters; you might as well have spat at the enemy. The guns limbered up and were off. Next came the vicious *phutt!* of a bursting shell not fifty yards from the armored train—and the armored train was puffing back for its life. Everybody went back half-a-dozen miles on the Ladysmith road to Modder Spruit Station.

*The enemy means fighting.*

The men on reconnaissance duty retired, as is their business. They had discovered that the enemy had guns and meant fighting. Lest he should follow, they sent out from Ladysmith, about nine in the morning, half a bat-



talion apiece of the Devonshire and Manchester regiments by train; and the 42d Field Battery, with a squadron of the 5th Dragoon Guards by road. They arrived, and there fell on us the common lot of reconnaissances. We dismounted, loosened girths, ate tinned meat, and wondered what we should do next. We were on a billow of veldt that heaved across the valley; up it ran, road and rail; on the left rose tiers of hills, in front a huge green hill blocked our view, with a tangle of other hills crowding behind to peep over its shoulders. On the right, across the line, were meadows; up from them rose a wall of red-brown kopje; up over that a wall of grass-green veldt; over that was the enemy. We ate and sat and wondered what we should do next. Presently we saw the troopers mounting and the trains getting up steam; we mounted; and scouts, advance-guard, flanking patrols—everybody crept slowly, slowly, cautiously forward. Then, about half-past two, we turned and beheld the columns coming up behind us. The 21st Field Battery, the 5th Lancers, the Natal Mounted Volunteers on the road; the other half of the Devons and half the Gordon Highlanders on the trains—total, with what we had, say, something short of 3,000 men and eighteen guns. It was battle!

*Arrival  
of the  
columns*

The trains drew up and vomited khaki into the meadow. The mass separated and ordered itself. A line of little dots began to draw across it; a thicker line of dots followed; a continuous line followed them, then other

lines, then a mass of khaki topping a dark foundation—the kilts of the Highlanders. From our billow we could not see them move; but the green on the side of the line grew broader, and the green between them and the kopje grew narrower. Now the first dots were at the base—now hardly discernible on the brown hill flanks. Presently, the second line of dots was at the base. Then the third line; and the second was lost on the brown, and the third—where? There, bold on the sky-line. Away on their right, round the hill, stole the black column of the Imperial Light Horse. The hill was crowned, was turned—but where were the Bo—

*The hill  
is turned.*

A hop, a splutter, a rattle, and then a snarling roll of musketry broke on the question; not from the hill, but far on our left front, where the Dragoon Guards were scouting. On that the thunder of galloping orderlies and hoarse yells of command—advance!—in line!—wagon supply!—and with rattle and thunder the batteries tore past, wheeled, unlimbered as if they broke in halves. Then rattled and thundered the wagons, men gathered round the guns like the groups round a patient in an operation. And the first gun barked death. And then, after all, it was a false alarm. At the first shell you could see through glasses mounted men scurrying up the slopes of the big, opposite hill; by the third they were gone. And then, as our guns still thudded—thud came the answer. Only where? Away, away on the right, from the

green kopje over the brown one, where still struggled the reserves of our infantry.

Limbers! From halves the guns were whole again, and wheeled away over plowland to the railway. Down went a length of wire-fencing, and gun after gun leaped ringing over the metals, scoring the soft pasture beyond. We passed round the leftward edge of the brown hill and joined our infantry in a broad, green valley. The head of it was the second sky-line we had seen; beyond was a dip, a swell of kopje, a deep valley, and beyond that a small sugar-loaf kopje to the left and a long, hog-back one on the right—a saw of small ridges above, a harsh face below, freckled with innumerable boulders. Below the small kopje were tents and wagons; from the leftward shoulder of the big one flashed once more the Boer guns.

*The guns  
join the  
infantry.*

This time the shell came. Faint whirr waxed presently to furious scream, and the white cloud flung itself on to the very line of our batteries unlimbering on the brow. Whirr and scream—another dashed itself into the field between the guns and limbers. Another and another, only now they fell harmlessly behind the guns, seeking vainly for the wagons and teams which were drawn snugly away under a hillside on the right. Another and another—bursting now on the clear space in rear of the guns between our right and left infantry columns. All the infantry were lying down, so well folded in the ground that I could only see the Devons

*The artil-  
lery duel.*

on the left. The Manchesters and Gordons on the right seemed to be swallowed by the veldt.

*Peppering  
with  
shrapnel.*

Then between the bangs of their artillery struck the hoarser bay of our own. Ball after ball of white smoke alighted on the kopje—the first at the base, the second over, the third jump on the Boer gun. By the fourth, the Boer gun flashed no more. Then our guns sent forth little white balloons of shrapnel, to right, to left, higher, lower, peppering the whole face. Now came rifle fire—a few reports, and then a roll like the ungreased wheels of a farm cart. The Imperial Light Horse was at work on the extreme right. And now, as the guns pealed faster and faster, we saw mounted men riding up the nearer swell of kopje and diving over the edge. Shrapnel followed; some dived and came up no more.

*A  
Breathless  
Moment.*

The guns limbered up and moved across to a nearer position toward the right. As they moved, the Boer gun opened again—Lord, but the German gunners knew their business!—punctuating the intervals and distances of the pieces with scattering destruction. The third or fourth shell pitched clean into a laboring wagon with its double team of eight horses. It was full of shells. We held our breath for an explosion. But, when the smoke cleared, only the near wheeler was on his side, and the wagon had a wheel in the air. The batteries unlimbered and bayed again, and again the Boer guns were silent. Now for the attack.

The attack was to be made on their front and their

left flank—along the hog-back of the big kopje. The Devons on our left formed for the front attack; the Manchesters went on the right, the Gordons edged out to the extreme rightward base, with the long, long boulder-freckled face above them. The guns flung shrapnel across the valley; the watchful cavalry were in leash, straining toward the enemy's flanks. It was about a quarter to five, and it seemed curiously dark for the time of day.

No wonder—for, as the men moved forward before the enemy, the heavens were opened. From the eastern sky swept a sheer sheet of rain. With the first stabbing drops horses turned their heads away, trembling, and no whip or spur could bring them up to it. It drove through mackintoshes as if they were blotting paper. The air was filled with hissing; underfoot you could see solid earth melting into mud; and mud flowing away in water. It blotted out hill and dale and enemy in one gray curtain of swooping water. You would have said that the heavens had opened to drown the wrath of men. And through it the guns still thundered and the khaki columns pushed doggedly on. *The terrible rain.*

The infantry came among the bowlders and began to open out. The supports and reserves followed up. And then, in a twinkling, on the stone-pitted hill-face burst loose that other storm—the storm of lead, of blood, of death. In a twinkling the first line were down behind rocks firing fast, and the bullets came flicking round them. Men stopped and started, staggered and dropped *The storm of death.*

limply as if the string were cut that held them upright. The line pushed on; the supports and reserves followed up. A colonel fell, shot in the arm; the regiment pushed on.

*The charge  
up the hill.*

They came to a rocky ridge about twenty feet high. They clung to cover, firing, then rose, and were among the shrill bullets again. A major was left at the bottom of that ridge, with his pipe in his mouth and a Mauser bullet through his leg; his company pushed on. Down again, fire again, up again, and on! Another ridge won and passed—and only a more hellish hail of bullets beyond it. More men down, more men pushed into the firing-line—more death-piping bullets than ever. The air was a sieve of them; they beat on the bowlders like a million hammers; they tore the turf like a harrow.

*The ridges  
stormed.*

Another ridge crowned, another welcoming, whistling gust of perdition, more men down, more pushed into the firing-line. Half the officers were down; the men puffed and stumbled on. Another ridge—God! Would this cursed hill never end? It was sown with bleeding and dead behind; it was edged with stinging fire before. God! Would it never end? On, and get to the end of it! And now it was surely the end. The merry bugles rang out like cock-crow on a fine morning. The pipes shrieked blood and the lust of glorious death. Fix bayonets! Staff officers rushed shouting from the rear, imploring, cajoling, cursing, slamming every man who could move into the line. Line—but it was a line no

longer. It was a surging wave of men—Devons and Gordons, Manchester and Light Horse, all mixed, inextricably; subalterns commanding regiments, soldiers yelling advice, officers firing carbines, stumbling, leaping, killing, falling, all drunk with battle, shoving through hell to the throat of the enemy.

And there beneath our feet was the Boer camp, and the last Boers galloping out of it. There also—thank Heaven, thank Heaven!—were squadrons of Lancers and Dragoon Guards storming in among them, shouting, spearing, stamping them into the ground. Cease fire!

It was over—twelve hours of march, of reconnaissance, of waiting, of preparation, and half an hour of attack. But half an hour crammed with the life of half a lifetime.

*Success  
at last.*

[In 1900, the United States Senate ratifies the Samoan treaty. The Boer General Cronje surrenders to Lord Roberts; the British army occupies Bloemfontein; Pretoria surrenders to Lord Roberts, and Lord Roberts proclaims the Transvaal British territory. A British force is attacked near Domo-passi by the Ashantis; an International Exposition at Paris attracts 60,000,000 visitors; the allies capture the Taku forts in China; the Chinese attack the Legations at Peking. Baron von Ketteler, the German minister, is murdered, and the allies take Tientsin; a fire in Hoboken, N. J., destroys vessels and docks

*Cronje  
surrenders.*

*King  
Humbert  
assassinated.*

and other property to the amount of \$10,000,000. King Humbert is assassinated at Monza and is succeeded by his son, Victor Emmanuel; the Duke of Abruzzi returns from a polar expedition, having reached  $85^{\circ} 33'$  N. lat., the highest point yet discovered. A tornado in Galveston, Texas, destroys 7,000 lives and \$30,000,000 in property. Prince Hohenlohe resigns the Chancellorship of the German Empire; a new Spanish Ministry is formed under General Azcarraga. The Cuban Constitutional Convention is opened in Havana.]



# THE BOXER MOVEMENT

(A.D. 1900)

SIR ROBERT HART

WE can not say we had no warning. Already in September, 1898, after the famous *coup* by which the reforming Emperor, Kwang Hsü, was relegated to the nothingness of harem life, and the well-known Empress Dowager, who had ruled the Empire through two minorities (Tung-Chih in the sixties and Kwang Hsü in the eighties), again came to the front, the attitude of Tung Fuh Hsiang's soldiers had disturbed the Legations, accentuated the possible insecurity of the foreign community, and brought guards to Peking, and in the autumn of the following year the Shanghai press called attention to the Boxer movement in Shantung—its genesis and aspirations, while the *Tien-tsin Times* was laughed at, in the spring of 1900, for its bold denunciations of the same movement and for its prophecies of the harm therefrom to come as the society's operations crossed the frontier and began to spread in Pecheli. In fact, if there was one

*The  
Empress  
Dowager's  
coup.*

*Foreign  
aggression.*

cry to which our ears had grown so accustomed as to mind it less than our own heart-beats, it was this Chinese cry of "Wolf!" Rebellion was ever on the point of upsetting the dynasty—the government was always on its last legs—foreigners were to be exterminated on a given date—the powers were about to partition China—etc., each year—nay, every month—the press or local rumor, Cassandra-like, foretold woe, and yet, barring a few episodes of various degrees of importance, the Government went on as before. The last half of the Nineteenth Century saw the Taeping rebellion, the "Arrow" war, the Tien-tsin massacre, the Franco-Chinese misunderstanding, the war with Japan, and the surrender of Cochin-China, Burma, Kiao Chow, Port Arthur, Wei-Hai-Wei, Kwang Chow-wan, etc., to the foreigner—it also saw the rejection of Italy's Chekiang demands—and still life went on unchanged and the cry of Wolf grew more and more meaningless: so it was not surprising that many supposed the Boxer scare would fizzle out similarly and with a minimum of danger to either Chinese Government or foreign interests. At the same time some of us regarded the movement as very significant, but we did not expect it to become a danger before autumn: its earlier development was a genuine surprise.

That it was patriotic in its origin and justifiable in much that it aimed at can not be questioned, and can not be too much insisted on, but, like other popular risings, its popular organization and formidable develop-

ment and widespread growth made it more likely to lead than to follow, while the claims of the initiated to something like supernatural powers in the matters of movement and invulnerability, exhibited first before Prince Tuan and then before Emperor and Empress Dowager, won for it a standing and respect which placed it on a plane of its own and went far toward giving it a free hand for its operations. Something akin to hypnosis and mesmerism seems connected with Boxer initiation and action: the members bow to the southeast, recite certain mystical sentences, and then, with closed eyes, fall on their backs; after this they arise, eyes glazed and staring, possessed of the strength and agility of maniacs, mount trees and walls, and wield swords and spears in a way they are unable to at other times; semi-initiation is said to render the body impervious to cut or thrust, while the fully initiated fear neither shot nor shell; the various sub-chiefs are, of course, fully initiated, but the supreme chief is described as more gifted still—he sits in his hall, orders the doors to be opened, and while remaining there in the body, is said to be elsewhere in spirit, directing, controlling, suggesting, and achieving.

*Supernatural  
powers of  
the Boxers.*

Those of us who regarded the movement as likely to become serious and mischievous put off the time of action to September: our calculations were wrong, for already in May it had spread from Shantung, was overrunning Pecheli, and was following the railway line from Pao-ting-foo, the provincial capital, toward Peking

*Growth of  
the move-  
ment.*

itself. Chapels were destroyed, converts were massacred, railway stations were wrecked, railway and telegraph lines were damaged, excitement was spreading and yet, although the state of the country all around grew more and more alarming, it still seemed to be a question whether the movement would roll back toward its source from Peking or take new shape there and gather new and onward impetus. Meantime, the Legations fortunately succeeded in getting up a few guards from the warships off Taku, so that there were from three to four hundred armed men in Peking for their protection—American, Austrian, British, French, Italian, Japanese, and Russian.

*Rumors  
and  
alarms.*

From the end of May the air was full of rumors and alarms, and all were on the alert, ladies and children spending the nights at the British Legation for safety; but the movement was still regarded as a Boxer movement, and we could not allow ourselves to believe that the Government would permit it to create disorder in Peking; much less that the troops would join it and its doings be accepted and approved of by the Chinese authorities: in fact, the troops appeared at one time to be operating against the Boxers and protecting the Machia-pu railway station from destruction, and thus helped to strengthen our old faith in the security of the capital; but to the eye of to-day that military movement was intended to obstruct the Admiral's force, and not to oppose the Boxers. On the 9th of June, the outlook

was so threatening that the Customs and College people were called in from the scattered quarters; and from that date to the 20th all lived at the Inspectorate, and combined with their neighbors, Japanese, Austrians, and French, to keep watch day and night.

Up to the 20th of June we had only the Boxers to deal with, but on the 19th, we were surprised by a Circular Note from the Yamên (Chinese Foreign Office), stating that the foreign naval authorities at Tien-tsin were about to seize the Taku forts, and ordering Legations to quit Peking within twenty-four hours. The Legations replied, and represented to the Yamên that they knew nothing of the Taku occurrence—that they regretted any misunderstanding—and that they could not possibly quit, or make transport arrangements, on such short notice. A proposal to visit the Yamên in a body was set aside, but on the morning of the 20th Baron von Ketteler, the German Minister, attended by his interpreter, Mr. Cordes, set off for the Yamên alone: his colleagues advised him not to go, but he felt that, having announced his visit, he must pay it. Ten minutes after he left the Legation, his Chinese outriders galloped back saying that he had been shot when going up the Ha-tamên Street. His interpreter, badly wounded, managed to escape to the Methodist Mission, and was thence taken back to the German Legation. It had previously been decided, in case of attack, to hold all the Legations as long as possible, but to fall back on the British Legation

*Note from  
the Yamên.*

*Murder of  
Baron von  
Ketteler.*

when necessary for united defence and a final stand; the order to quit Peking, and the seemingly official murder of a Minister, rather precipitated matters, and before the twenty-four hours' limit had expired (4 P.M., 20th of June) all the ladies and children were in the British Legation, and also the various foreign representatives.

*Soldiers  
attack the  
Legations.*

Up to the 20th of June we had—as already stated—only Boxers armed with sword and spear to fear, but on that day rifles began to be used, and soldiers fired them—notably men belonging to Tung Fuh Hsiang's Kan-suh command. Our longing for the appearance of Admiral Seymour grew intense, and night after night we buoyed ourselves up with calculations founded on the sound of heavy guns in the distance or the appearance of what experts pronounced to be search-lights in the sky: soon, however, we gave up all hope of the Admiral's party, but, supposing that the Taku forts had been taken on the 18th, we inferred that a few days later would see a large force marching from Tien-tsin for our relief, and that within a fortnight it would be with us—otherwise, why imperil us at Peking by such premature action at Taku?

*The  
Legations  
besieged.*

We were under fire from the 20th to the 25th of June, from the 28th of June to the 18th of July, from the 28th of July to the 2d of August, and from the 4th to the 14th of August: night and day rifle bullets, cannon balls, and Krupp shells had been poured into the various Legations from the gate in front of the Palace

itself, from the very wall of the Imperial City, as well as from numerous nearer points around us, and the assailants on all sides were Chinese soldiers; whether the quiet of the 26th and 27th of June and 19th to 27th of July was or was not ordered by the Government we can not say, but the firing during the other periods, close as we were to the Palace, must have been by the orders of the Government; and it cost our small number over sixty killed and a hundred wounded! That somebody intervened for our semi-protection seems, however, probable: attacks were not made by such numbers as the Government had at its disposal—they were never pushed home, but always ceased just when we feared they would succeed—and, had the force round us really attacked with thoroughness and determination, we could not have held out a week, perhaps not even a day; and so the explanation that there was some kind of protection—that somebody, probably a wise man who knew what the destruction of the Legations would cost Empire and Dynasty, intervened between the issue of the order for our destruction and the execution of it, and so kept the soldiery playing with us as cats do with mice, the continued and seemingly heavy firing telling the Palace how fiercely we were attacked and how stubbornly we defended ourselves, while its curiously half-hearted character not only gave us the chance to live through it, but also gave any relief forces time to come and extricate us, and thus avert the national calamity which the Palace

*Explanation of salvation.*

in its pride and conceit ignored, but which some one in authority in his wisdom foresaw and in his discretion sought how to push aside.

*The attack renewed.*

On the 4th of August our assailants' rifles again began to be troublesome, and the list of killed and wounded was added to. On the 7th some additional barricades isolated us even more than ever, and at the same time despatches from the Yamên announced that Li Hung Chang was appointed to arrange matters by telegram with the various Foreign Offices. On the 8th the firing was lighter, and letters of condolence came from the Yamên communicating the news of the deaths of the King of Italy and the Duke of Edinburgh; but on the 9th heavy firing was resumed, and grew heavier and heavier until the 14th, the nights of the 12th and 13th being specially noisy, and the latter so threatening—one shell bursting in the Minister's bedroom—that the Jubilee bell summoned everybody to arms twice: our previous assailants had been withdrawn and the newly arrived Shansi contingent had taken their places armed with the very best repeating rifles and headed by a general who undertook to finish with us in five days, "leaving neither fowl nor dog." Their five days were ending on the 12th, and the general was at the barricades in person, encouraging his men; but, happily, part of the barricade gave way and exposed those behind it, who were at once shot by our people, the general himself falling to the rifle of a Customs volunteer, Mr. Bismark.

*Arrival of the Shansi contingent.*



Our position had been strengthened in every possible way, but the assailants were growing bolder, and the experiences of the 13th showed that they would probably rush it in overwhelming numbers the next attack. Fortunately for us, the morning of Thursday, the 14th, brought us the welcome sounds of the Maxims and guns of the relieving forces; and about 3 P.M. General Gazelee and General Chaffee were shaking hands with us.

*Relief force arrives.*

What precedes, as already explained, is not a chronicle—it is simply a note to give readers a bird's-eye view of the unprecedented occurrences of a Peking summer, and prepare the way for directing attention briefly to the future thereby foreshadowed: as for daily details, they will be found in many quarters elsewhere from the reports and pens of many observers. The episode of to-day is not meaningless: it is the prelude to a century of change and the keynote of the future history of the Far East: the China of the year 2000 will be very different from the China of 1900! National sentiment is a constant factor which must be recognized, and not eliminated, when dealing with national facts, and the one feeling that is universal in China is pride in Chinese institutions and contempt for foreign: treaty intercourse has not altered this—if anything, it has deepened it, and the future will not be influenced by it. The first question now to be settled by the Treaty Powers is how to make peace—for China is at war with all, and what conditions to impose to safeguard the future—for the stipulations

*Significance of the event.*

*How to make peace.*

of the past have been set at defiance and obliterated. There would seem to be a choice between three courses—partition, change of dynasty, or patching up the Manchoo rule. That the future will have a “yellow” question—perhaps a “yellow” peril—to deal with is as certain as that the sun will shine to-morrow. How can its appearance be delayed, or combated, or by any action taken now turned into harmless channels?

*China's  
sources of  
wealth.*

But what is this “Yellow Peril”? The Chinese, an intelligent, cultivated race, sober, industrious, and on their old lines civilized, homogeneous in language, thought, and feeling, which numbers some four hundred millions, lives in its own ring fence, and covers a country which—made up of fertile land and teeming waters, with infinite variety of mountain and plain, hill and dale, and every kind of climate and condition—on its surface produces all that a people requires and in its bosom hides untold virgin wealth that has never yet been disturbed—this race, after thousands of years of haughty seclusion and exclusiveness, has been pushed by the force of circumstances and by the superior strength of assailants into treaty relations with the rest of the world, but regards that as a humiliation, sees no benefit accruing from it, and is looking forward to the day when it in turn will be strong enough to revert to its old life again and do away with foreign intercourse, interference, and intrusion. It has slept long, as we count sleep, but it is awake at last, and its every member is tingling with Chinese

feeling—"China for the Chinese, and out with the foreigners!" The Boxer movement is doubtless the product of official inspiration, but it has taken hold of the popular imagination and will spread like wildfire all over the length and breadth of the country; it is, in short, a purely patriotic volunteer movement, and its object is to strengthen China—and for a Chinese programme. Its first experience has not been altogether a success as regards the attainment through strength of proposed ends—the rooting up of foreign cults and the ejection of foreigners, but it is not a failure in respect of the feeler it put out—will volunteering work?—or as an experiment that would test ways and means and guide future choice: it has proved how to a man the people will respond to the call, and it has further demonstrated that the swords and spears to which the prudent official mind confined the initiated will not suffice, but must be supplemented or replaced by Mauser rifles and Krupp guns: the Boxer patriot of the future will possess the best weapons money can buy, and then the "Yellow Peril" will be beyond ignoring. Wên Hsiang, the celebrated Prime Minister of China during the minority of Tung Chih in the early sixties, often said: "You are all too anxious to awake us and start us on a new road, and you will do it; but you will all regret it, for, awaking and started, we shall go fast and far—further than you think—much further than you want." His words are very true.

*What the  
Boxer  
movement  
really is.*

*The Yellow  
Peril.*

*Motives of  
the Boxers.*

The first doings of the Boxer patriots show that their plan of operations was on the one hand to destroy Christian converts and stamp out Christianity, and thus free China from the, in their eyes, corroding influence of a foreign cult, and, on the other,—not to hurt or kill, but—to terrify foreigners, frighten them out of the country, and thus free China from foreign trespass, contamination, and humiliation, and these are the objects which will be kept in view, worked up to, and in all probability accomplished—with other weapons in their hands—by the children or grandchildren of to-day's volunteers.

*The Boxers  
of the  
future.*

Twenty millions or more of Boxers, armed, drilled, disciplined, and animated by patriotic—if mistaken—motives, will make residence in China impossible for foreigners, will take back from foreigners everything foreigners have taken from China, will pay off old grudges with interest, and will carry the Chinese flag and Chinese arms into many a place that even fancy will not suggest to-day, thus preparing for the future upheavals and disasters never even dreamt of. In fifty years' time there will be millions of Boxers in serried ranks and war's panoply at the call of the Chinese Government: there is not the slightest doubt of that! And if the Chinese Government continues to exist, it will encourage—and it will be quite right to encourage, uphold and develop—this national Chinese movement: it bodes no good for the rest of the world, but China will

be acting within its right, and will carry through the national programme.

[In 1901, The Hague Court of International Arbitration is organized. The first Territorial Legislature in Hawaii meets. A Pan-American Exhibition is held at Buffalo and an International Exhibition in Glasgow. Santos-Dumont's airship sails around the Eiffel Tower. Prince Chun goes to Germany to express regret for the murder of Baron von Ketteler. President McKinley is shot at the Pan-American Exhibition in Buffalo on September 6, and dies on September 14, when Theodore Roosevelt takes the oath of office. The Pan-American Congress is opened in the City of Mexico. The South Carolina and West Indian Exhibition is held in Charleston, S. C. Great Britain and the United States sign the Isthmian Canal treaty. In 1902, the Emperor and Empress Dowager of China re-enter Peking. England and Japan form an alliance to preserve the integrity of China and Korea. An earthquake in Transcaucasia kills about 2,000 people. Prince Henry of Prussia visits the United States. China and Russia sign a convention at Peking, wherein Russia agrees to evacuate Manchuria. The first Congress of the Cuban Republic meets at Havana. An eruption of Mont La Soufrière, St. Vincent's, on May 7, destroys 2,000 persons, and on May 8 an eruption of Mont Pelée, Martinique, destroys St. Pierre and 30,000 inhabitants. T. Estrada Palma is inaugurated first Presi-

*The Hague Court.*

*President McKinley assassinated.*

*T. Estrada  
Palma first  
'resident  
of Cuba.*

*The  
Canadian-  
Australian  
cable com-  
pleted.*

dent of Cuba; the Campanile at Venice falls. Mont Pelée is again in eruption (August 30-September 4), and more than 2,000 persons are killed. Lieutenant Peary travels to  $84^{\circ} 17'$  northwest of Cape Hecla. Stanley Spencer, the English aeronaut, sails his airship 30 miles over London. The Canadian-Australian cable, of 3,455 miles, from Vancouver to Fanning Island, is completed. The Assouan Dam on the Nile is opened December 8. Great Britain and Germany present an ultimatum to Venezuela, seize her fleet, and demolish a fort at Puerto Cabello. Venezuela appeals to the United States for arbitration.]

# ASSASSINATION OF PRESIDENT McKINLEY

(A.D. 1901)

WEMYSS REID

THE chief event to be recorded here is the sad and most unexpected tragedy of which the city of Buffalo was the scene on Friday, the 6th of September. President McKinley, whose power and popularity seemed to be steadily growing, and who had just found it necessary to announce that under no circumstances would he consent to serve for a third term in the Presidential office, had arrived a day or two earlier in the town in order to visit the Pan-American Exhibition. Thursday, the 5th, was "President's Day" at the Exhibition, and on that day "the greatest crowd that has ever assembled on the esplanade heard Mr. McKinley's speech, which was a long one and the most important he has delivered for a considerable time." It was, indeed, of an importance even greater than was realized by the reporters and critics of the moment, for its gist was an acknowledgment by the High Priest of

*President's  
Day at the  
Pan-  
American  
Exhibition.*

Protection that the time was come when Protectionism pure and simple could no longer be maintained with advantage to the United States, and when it was necessary in the interests of the new "world policy" of the Great Republic to modify it in the direction of a system of reciprocity.

*McKinley's  
speech.*

"Isolation," said the President, addressing not only the greatest crowd Buffalo had ever known but all the people of the United States, "is no longer possible or desirable. . . . Our capacity to produce has developed so enormously that the problem of more markets requires immediate attention. A system which provides for the mutual exchange of commodities is manifestly essential. We must not repose in the fancied security that we can forever sell everything and buy little or nothing. Reciprocity is the natural outgrowth of our wonderful industrial development. If, perchance, some of our tariffs are no longer needed for revenue or to protect our industries, why should they not be employed to extend our markets abroad?"

To describe such a speech as epoch-making is not to exaggerate. The President's words proclaimed the fact that a new departure in the policy of the United States was imminent, one that was bound to have momentous and far-reaching consequences, and that could not fail to have a direct and far-reaching influence upon the fortunes of all the great nations of the world.

But before men had realized the full meaning of



McKinley's utterance, before even the hurried commentators of the daily newspapers could expound his text to their readers, an event happened which gave to the speech a new and tragical significance, and for the moment swept its grave import out of men's minds. In that great crowd on the Thursday afternoon, unobserved by everybody and certainly unnoticed by the police, whose business it is, in the United States as elsewhere, to guard the person of the Chief of the State, was a young man of German-Polish descent, named Czolgosz, a native of Detroit, who had come to Buffalo intent upon the murder of the President. He was, as he subsequently confessed, an Anarchist, who had listened eagerly to the teachings of Emma Goldman and other apostles of Anarchism who have been free for many years past to spread their doctrines in Chicago and other great cities of the Union. Despite his constitutional timidity he had nerved himself to the commission of a stupendous crime, and but for the fact that the pressure of the crowd on Thursday was so great that he could not approach the President, he would in all probability have accomplished his vile purpose whilst Mr. McKinley was in the very act of delivering his great speech. Foiled on that occasion by the vast bodyguard of citizens who surrounded their Chief Magistrate, Czolgosz did not relinquish his intention. On the following day, Friday, the 6th of September, the President held a public reception in the Temple of Music, one of the buildings erected in con-

*Czolgosz  
arrives in  
Buffalo.*

*How the  
assassin ac-  
complished  
his deed.*

nection with the Exhibition. Here, according to the immemorial usage of the Republic, he was at home to everybody, and the assassin, like any other citizen, was free to shake hands with him if he wished. Czolgosz was consequently enabled to come into close contact with Mr. McKinley, and he took advantage of the opportunity thus afforded him to commit the crime on which he was intent. At the very moment when the President was smilingly extending his hand to the murderer, the latter deliberately shot his unsuspecting victim in two places. One bullet struck Mr. McKinley's breast-bone, but did not penetrate the body. The other passed clean through his stomach and lodged in the muscles of the back.

*"Am I  
shot?"*

We can all realize the awful moment that followed the cruel deed—the horrified incredulity of the crowd, quickly changing to consternation and a passionate rage against the criminal, the alarm of the President's friends and colleagues standing around him, and the pathetic inquiry of the martyr himself: "Am I shot?" The whole tragedy passed, as it were, in the twinkling of an eye, and before half the crowd in the hall knew what had happened Mr. McKinley was being carried to a neighboring hospital, whilst the assassin, whom the crowd vainly attempted to lynch was being hurried to a cell in the police station. Of the week of mingled hope and fear that followed there is little need to speak. For some days it seemed as though the President would recover, and

the hopes not only of his devoted wife and sorrowing fellow-citizens but of the whole civilized world ran high. Then on Friday, the 13th of September, grave symptoms set in almost without warning and gave the lie to the optimism of the surgeons. Twenty-four hours later Mr. McKinley sank below the cruel blow, and a new President ruled in his place over the United States.

Such is the brief recital of a deed that equals in wickedness any of the same kind inscribed on the page of history. Before speaking of the character of the victim, it is well to put on record the depth and universality of the sympathy which his fate evoked. Twice before within living memory have Presidents of the United States died by assassination. Many of us remember how the news of Abraham Lincoln's fate was received in this country where he had not a few ardent admirers; most of us can recall the long weary days during which President Garfield was slowly sinking to his grave. But on neither of these occasions was there anything comparable to the public emotion that was caused by the death of Mr. McKinley. From every quarter the warmest expressions of sympathy were directed to the bereaved nation. Most noticeable of all was the extent to which the sovereigns of Europe participated in the general grief. If at a moment like the present the people of the United States can find consolation in such a thought, they can undoubtedly console themselves with the knowledge that the tragedy at Buffalo has drawn from the mon-

*Sympathy  
of the  
whole  
civilized  
world.*

archs of the whole world heart felt utterances which prove that they recognize in the holder of the American Presidency one who belongs of right to their own order—the ruler of a nation who shares not only the dangers but the dignities of the proudest sovereigns upon earth. To those of us who are old enough to look back as far as Lincoln's time all this seems strange and wonderful. If, on the one hand, this world-wide manifestation of sympathy bespeaks the growing solidarity of civilized mankind, on the other hand it proves how fully the Great Republic has taken its place in the ranks of the World Powers. President McKinley's death has given Europe the opportunity of acknowledging the fact that the United States now ranks, not merely in material wealth and energy, but in political influence and moral force, with the greatest Powers of the Old World.

*Estimate of  
McKinley's  
qualities.*

Mr. McKinley himself was not to be reckoned among the really great ones of the earth. He could not compare with some predecessors of his own in the Presidential chair. Nobody, for example, would place him on the same level as the Titanic hero of the Civil War. But he was strong and shrewd, honest and patriotic. That he was almost fanatical in his devotion to Protection as the sheet-anchor of the economic policy of the United States was not to be denied. But in the main he was an opportunist, and even upon Protection he had, as his last speech proved, yielded to the logic of facts. During his tenure of office his country had deliberately aban-

doned the purely American policy which she had carefully maintained throughout her history, and had entered upon that path of Imperialism which has so strong an attraction for every growing Power. But it may be doubted whether Mr. McKinley was the real author of this new departure. What he did was to recognize that the opportunity had come, that the public—or the party—demanded that it should be seized, and to yield to what he believed to be the sentiment of the nation. That he sought to make the new departure as little dangerous to American interests as possible, and that he strove constantly to keep up peaceful relations with the European Powers, and above all with Great Britain, must be fully conceded to his credit.

*The  
advent of  
Impe-  
rialism.*



# THE DESTRUCTION OF ST. PIERRE

(A.D. 1902)

ROBERT T. HILL

WHAT has to-morrow in reserve for us? A flow of lava, a rain of pumice-stone, jets of asphyxiating gas; what submerging cataclysm, or will there be simply an inundation of mud? There is a great secret, and when it is known many men will be unable to bear it.”—Editorial from “La Colonie” of May 7, 1902, the last paper published in St. Pierre. *Prophetic apprehension*

The editor of “La Colonie” wrote the foregoing portentous words two days before the great explosion, and they were probably the last copy hung upon the hook. They appeared in the columns of the last paper that was ever published in St. Pierre and were preserved through the energy of Father McGrail, the chaplain of the *Dixie*, who by scouring the shops of Fort de France, secured a file of the paper for a week prior to the catastrophe, which constitutes one of the most precious results of the expedition.

*Pelée's  
activity.*

For a week the editor had been filling his columns with words of hope and cheer while ominous ashes were darkening his sanctum window and the detonations within the bowels of Pelée were frenzying the population. Through those preceding days of general fear these were the only words of despair in his paper, and must have been written as the stimulus of hope deserted him and as he, at last, saw the finger of fate through the sombre surroundings. The following day, there were thirty thousand who were unable to bear the great Secret which was made known to them only by its great power.

*The secret  
force.*

To-day, the great question still is, What was the secret force that so quickly destroyed the people of St. Pierre consumed their houses by fire and then by reappearance so annihilated the city that in a few weeks the tropical vegetation, already springing up over its levelled ruins, will so hide them that the passing observer will not be able to locate its site? The destruction of St. Pierre was by forces never before recorded in the annals of volcanic disaster, and the scientific members of the *Dixie* expedition, who studied the phenomena, were confronted by conditions which they never anticipated and which will require months fully to explain.

*Cataclysmic phe-  
nomena.*

Closely after the first news of the disaster reports were sent describing cataclysmic phenomena of many kinds as having accompanied the volcanic outbursts of Pelée and St. Vincent. It was announced that the entire upper half of Mont Pelée had been destroyed; that the coast



had sunk to great depths; that the coast line had been changed; that the earth had quaked; that great fissures had rent the earth, opening new and terrible chasms; and that lightning of tremendous effect had accompanied the eruption, especially in St. Vincent, where it was alleged that over fifteen hundred people had been killed by it.

Yet the Isle of Martinique to-day shows no serious change, except immediately around the thin rim of the old crater of Pelée, where some of the small projecting peaks, like those of Morne la Croix, have tumbled in, lowering by this process the summit only some sixty metres (two hundred feet). Every hill, valley, scarp, precipice or other surface feature of the relief as laid down upon the map of 1823 is distinctly recognizable. The only changes are merely the superficial destruction of vegetation and the veneering of a small triangular area with a thin layer of ashes and mud, so that it is converted from a green carpet of cane and woodland to a barren, desert mountain landscape like that of Arizona. Nineteen-twentieths of the area of Martinique is as green and beautiful to-day as ever. *Slight physical changes.*

Yet something terrible had happened, as attested by the thirty thousand dead and the terror of the hundred and fifty thousand survivors.

This Secret, which destroyed bright and cheerful St. Pierre, and changed it into that ghostly, horrid ruin, will haunt me until my dying day. What was it?

*No lava  
flow.*

It was not a flow of lava that the morrow had in reserve. Pelée has not sent forth flowing streams of molten rock for many thousand years. It is true that in the foundations of Martinique as seen around Fort de France there are ancient masses of lava,<sup>1</sup> which may have once flown upon the surface, but these have been covered by thousands of feet of ashes (lapilli) and mud flows such as Pelée spits forth at long intervals of time.

Neither was it a rain of stone that overwhelmed the helpless people. There was for a few moments a fall of light pumice-stone, but these stones did not finish their hurtling flight or reach the earth until all the souls had joined their Maker. There is no record of this material in Martinique as having injured any person or thing. It was shot into the air with great velocity and did not reach the city until most of its inhabitants were dead. Furthermore, owing to its cellular structure, although heated when ejected, it probably cooled quickly in the air, while its specific gravity was so light it is doubtful if pieces of the size which fell would have injured any one struck by them.

Over the ash-covered surface of the area of destruction from Prêcheur to Carbet, except in the immediate city where their presence is obscured by the *débris* of the houses, one finds everywhere a cement-like covering of ashes which is dotted here and there by small stones of

<sup>1</sup> Hornblende and hypersthene-andesite, as determined by Mr. J. S. Diller from the writer's recent collections.

pumice which fell upon the surface. In some cases near the Rivière Blanche there are great bowlders of this material which were brought down by the surging waters in the days of strenuous overflow.

Neither was it an "inundation of mud" that destroyed St. Pierre. Rivers of mud there were, and he who looks over the vast plain of Consolation back of St. Pierre and the former plain of the Rivière Blanche—but a month ago sapphired fields of cane—now sees only great slopes of mud.

*No inundation of mud.*

Neither was there an earthquake of sufficient force to cause the death and desolation of St. Pierre. There were tremors, it is true, which snapped the ocean cables like fiddle-strings, but these were so slight that they were hardly felt upon the land, except where recorded upon the sensitive instruments in the observatory of the Lycée, and, as written by the dead observer, "being horizontal they were not felt by persons." Furthermore, there is no evidence throughout the island of a stone or stick having been shaken from its place by earthquakes.

The submerging cataclysm with its Secret, which thirty thousand people were unable to bear, is one the like of which has never before been recorded in the annals of disasters resulting from nature's stupendous forces. I can not here submit detail evidence as recorded in my notebooks with dates and names of witnesses, but shall endeavor to interpret what happened as I concluded from all testimony, including narratives of human sur-

*An unprecedented disaster.*

vivors and eye-witnesses of the catastrophe, the silent evidence of the ruin and wreckage, and my personal observation of the several subsequent great eruptions.

*Distinct  
phe-  
nomena.*

Two great and distinct kinds of phenomena probably took place on that eventful morning of May 8, one within and the other without the crater. As a whole, they may be compared to those which accompany the firing of a projectile from a great gun involving (1) the explosion of one kind of gas, creating a propelling force which may be compared to a gun within the crater, and (2) the travelling through the air of a deadly projectile (a cloud of hot steam, gas, and smoke) which may or may not itself have been explosive.

1. Within the crater there was a terrific explosion, presumably from the meeting of water and the molten rock matter.

2. This explosion projected out of the mouth of the crater a dense cloud of ash (lapilli), steam, and heavy gases.

3. Following the cloud was the vertical flash from the crater itself, presumably the flame of combustible hydrogen within the crater.

4. Succeeding the flame was the noise of the detonation, which, although originating instantaneously with the flame and puff, owing to the slowness with which sound travels, was not evident to outsiders until the preceding phenomena had been observed.

The great gun having fired its projectile, let us consider what subsequently happened to the latter:

1. The force of elevation being soon overcome, the cloud mushroomed, first making a dense, round, boiling head, which has been variously compared to a cauliflower, a human brain with its convolutions, and the spreading foliage of a palm tree. *The mushroom-shaped cloud.*

2. The material in the clouds was heavier than the atmosphere—at least in the case of the cloud erupted from the lower vent—and hence, after losing the vertical direction of projection, it sank downward toward the surface of the earth through gravity and was propelled southwestward by the strong trade-winds.

3. After reaching the external air, and a short distance from the crater, lightning-like flame and explosion took place in the cloud.

4. This generated still greater heat in the already hot cloud and fired the buildings in its path.

5. The ignition was of an explosive nature which caused a terrific air movement that travelled rapidly in all directions from the seat of explosion. *Terrific air movements.*

6. After the propulsion of the air outward by the explosion there followed a return movement of the air from the inrush to fill the vacuum which had been created.

7. The ignition in the cloud may have been the combination of some heavy gas with atmospheric oxygen,

and this exhausted the latter from the atmosphere so that there was nothing to breathe.

8. The cloud of ash, steam, and gas was hot when it left the volcano—sufficiently so to injure people who were not necessarily within the radius of the explosion.

*Three  
successive  
eruptions.*

On that morning there were three of these double-natured eruptions in rapid succession. The first, which came from the summit of the mountain, was a vast column of black ashes mingled with steam, which ascended and spread out like a great palm tree—as stated by Father Altaroche, who witnessed it from a commanding view at the village of Mont Vert, five miles due south of Pelée peak. A few moments later another great puff of similar material arose from the lower crater of the western slope of Mont Pelée, nearly fifteen hundred feet below the summit. These great smoke clouds were at first propelled upward into the outer air by the initial explosion within the mountain, the light of which was not seen nor the noise heard until the puffs had come out of the vents. Then followed great jets of flame from the mouth of the crater like the flash of a great gun. Some seconds after this the stupendous booming of the detonations reached the ears of those who had observed the cloud of smoke and seen the flash of light. Had this been all, the people of St. Pierre would have been alive to-day; but, besides the explosion within the mountain, the evidence strongly points to another one in the air, and the nature of this is the Secret of the

*Explosion  
in the air.*

submerging cataclysm which the people of St. Pierre were unable to bear.

Contrary to those laws of nature which would have been followed had the clouds been composed only of hot steam and lapilli, the great cloud from the lower crater, instead of rising, descended and closely hugged the contour of the land as it rolled away in a south of west direction toward the sea and over the fated city. What was the Secret of that descending heated cloud which caused it to fall instead of rise?

Let us digress for a moment to look again at the summit cloud. Some seconds after it had left the crater, and long after the upward shoot of flames within the crater had died, great jagged streaks of fire were observed shooting back and forth, upward and downward, here and there through all parts of the black cloud, lightning-like in their effect, yet unlightning-like in color and action, and unaccompanied by thunder. There was apparently something born in that cloud after meeting the outer air which, notwithstanding its superheated condition within the crater, did not ignite until it left it. That something was the Secret of Pelée. *The summit cloud.*

These lower clouds of lapilli were not only hot and heavy, but after they had reached the outer air and become well mixed with it another terrible phenomenon occurred. This floated on southwest in the direction of the trade-winds toward the fated city, and, when almost upon it, several seconds after having emerged from the *Another terrible phenomenon.*

vent, it ignited and exploded, and at that moment, within the radius of its action, all nature cried:

“Death has struck, and nature, quaking,  
All creation is awaking,  
To its judgment answer making.”

While we who were spared from participation in such a catastrophe might well say, “Deliver me, O Lord, from that eternal wrath on that awful day when the heavens and earth shall be shaken and Thou shalt come to judge the world by fire.”

*Sheets of  
flame.*

There was no thunderous noise or detonation, but with terrific force sheets of flame ignited within this cloud and, as seen by Father Altaroche, travelled from north to south over the city with lightning quickness, setting fire to it. Merely a blinding flash of fire within the cloud, and in a moment the whole of the great fire-proof city built of stone, with roofs of iron and tile, was on fire.

That something in that awful cloud, which had fallen instead of risen and had exploded over the northern end of the city—the terrible Secret—was probably an invisible gas fired from the crater that united with another in the air.

*The two  
gases.*

All the phenomena of the catastrophe tell us that the latter of these gases could only have been the oxygen of the air. The nature of the other gas (if there was one) which was belched from the crater and contained



within the dark cloud of lapilli that rolled down from Le Tang Sec was a heavy gas the composition of which is still unknown. It was a gas which would not ignite within the oxygenless crater even under the intense heat there present, but which exploded with fatal force upon mixing with the oxygen of the cool air a mile from the crater.

The first explosion within the crater was more than a steam puff. The upward-shooting flame which followed it was most probably hydrogen gas, accompanied by the sodium colors derived from sea waters.

The Secret of Pelée, according to our present working hypothesis, now resolves itself into a question of the determination of the gases. Of these there were probably at least two kinds, if not more. The great volume of water, the meeting of which with the hot magma of rock is the fundamental cause of volcanic explosions within the crater, was probably resolved into oxygen and hydrogen, and the latter burned after the projectile cloud had shot forth. *The Secret of Pelée.*

But what of the gas in the projectile cloud which did not burn within the fiery crater, but shot forth into the air, combined with the oxygen of the air? It is well known that some volcanoes emit carbon monoxide, which has an affinity for free oxygen of the air, but this is a lighter gas than air and would not have floated downward. Again, there is the wholly explosive marsh gas ( $\text{CH}_4$ ), and this Professor Landes of the St. Pierre

College reported he had detected in the mud of the Rivière Blanche several days before the great Secret enveloped him: but this gas is also lighter than air.

*Sulphu-  
retted  
hydrogen.*

At present we have in view but one other explosive gas which might have caused this damage, sulphuretted hydrogen ( $\text{H}_2\text{S}$ ). This gas has a specific gravity of 17, which is much heavier than that of air (14.5), and is the only one of the gases mentioned which could have floated downward upon the city. There is much evidence to this effect.

Should Science, with data in hand, write an epitaph over St. Pierre, it would be a cryptogram as follows:  $\text{H}_2\text{S} + \text{O}$ .

*Various  
theories.*

But there are alternative hypotheses concerning the nature of the Secret, and one of these is that the destruction came from a blast of intensely hot steam and cinders. The data thus far collected tend strongly to uphold the gas explosion theory. Yet the evidence must all be in before the final verdict can be given.

# THE AUTOMOBILE

(A.D. 1902)

ROBERT CRAWFORD

FRANCE is the paradise of the motor-car, and is likely to remain so a few years longer. The birth and rise of this new form of locomotion is but a short chapter in the history of modern industry, but it is a fascinating one. Builders and buyers alike were enthusiasts and poets in their way. The former can boast of a record of steadfast faith, of dogged struggles with all manner of difficulty and disappointment, of plunges into seemingly wildcat ventures, which, in defiance of all reasonable expectations, have turned out well; the latter may claim to rank as sheer enthusiasts with the Dutch tulip-fanciers of old. The whole history of automobilism in France is colored by the spirit of enthusiasm of its founders—of those who made the first auto-cars, and of those who bought them.

*France the  
home of the  
auto-car.*

Those motorists, in bearskin jackets (in July!) and with yachting-caps and smoked spectacles, are legion, who dash along the roads of France, and cheerfully

*Pioneers  
and  
patriots.*

swallow dust for hours because they believe that they are fulfilling a mission as pioneers of "the Great National Industry"; and when they get into difficulties with the police for "scorching" (nineteen miles an hour is the limit, except for races, with special town regulations), they are not unwilling to look upon themselves as martyrs for *the* cause.

The history of automobilism in France may be divided into four periods: (1.) The early—almost prehistoric—period of steam-boiler carriages from 1860 to 1880. There were horseless carriages in England some years before, not to mention a self-propelled vehicle known to have existed in 1769; but this interesting infant industry was stifled by the Locomotion Act. (2.) The birth and development of modern automobilism, 1880 to 1890. (3.) A period of great prosperity, due to the oil motor, 1890 to 1895. (4.) The modern period. The first half of this period, 1895 to 1898, coincides with the racing mania; the latter half with a reaction of public opinion against racing, ending in prohibition of high speed, except under severe limitations.

*Count  
le Dron.*

The great year 1882 is a landmark. Count de Dion, the friend of General Boulanger, a society man and an authority on duelling, suddenly disappeared from politics and from the clubs, and no more was heard of him for some time. He had resolved to do something, to get on; but how was he to succeed unless by striking out in some entirely new line? He had made the acquaintance

of a mechanic named Bouton, whose head was full of notions, which, with his old foreman's experience, he knew how to put into practical shape. Count de Dion brought a little capital, social connections, and—as it turned out—no mean degree of business ability. They put their heads together, and decided that they would build horseless carriages. Why that, and not something else? Probably because cycling was fast coming into vogue: the “safety” dates about this time. The two partners foresaw that cycling would create a taste for fast travelling on roads. *Developments of cycling.*

For some years Count de Dion and Bouton worked in their wooden shanty at Suresnes sustained by faith. They were literally building the cart before they knew where they could get the horse—I mean a good motor. Industry, in their case, had its romance. They worked with the self-confidence of youth. An old-established firm of machine builders would not attempt the horseless carriage problem, because there was abundant reason to believe nothing would be gained by it.

It seemed impossible at the time to build a small and yet efficient machine. Count de Dion and Bouton were two years before finding a suitable boiler. In 1884, they turned out a bicycle with machinery weighing one hundred pounds and running eighteen miles an hour. In the following year they could do one kilometre in one minute on a tricycle. The year 1888 is another date to be remembered. The cycling boom had reached its *The first car.*

height in that year, races were being run on every national road, velodromes were set up all over the country (most of them since become bankrupt), and betting on cycling events was prevalent.

*Serpellet's  
invention.*

M. Serpollet's small-bore tubular boilers (an altogether remarkable invention) solved the problem of making a light yet efficient engine. This was in 1888, and M. Serpollet's invention has stood the test of time. At the 1900 *salon du cycle* a Serpollet carriage was exhibited, which was purchased by King Edward VII.

Automobilism is so much associated in people's minds with petroleum that an effort of memory is necessary to remember that it began with steam. Automobilism was popular in France before it was practical. The wish was father to the success. Very likely this will again be the case in aërial navigation. In 1894, the "Petit Journal" opened a prize contest to be run from Paris to Brest and back (750 miles).

In 1895, a new invention revolutionized the automobile industry—namely, the oil motor—for which we are indebted to Herr Daimler. The Daimler motor was immediately adopted by the motor-car building firms of Panhard & Levassor and Peugeot.

*The oil  
motor.*

It would not be unfair to say that, after this far-reaching invention, subsequent improvements in oil vehicles have been merely improvements of detail, accumulated, however, in such number as to make a modern auto-car

a very different thing from its prototype of ten or fifteen years ago.

The history of automobile racing in France is a brief but a checkered one. It covers a period of six or seven years, during which the attitude of the public has undergone several changes. These phases of opinion form convenient subdivisions for the purpose of our history. Motorists of the furious-driving school are apt to resent remarks of outsiders. But has not the man in the street the right to say he objects to being run over?

Between 1892 and 1895 motor cars were already snorting along the highways of France. Motorists were received in the towns with misgivings and in the villages with positive hostility. The peasants resented the noisy, terrifying horseless carriage that ran over their dogs and chickens, and in the hands of inexperienced drivers, caused serious accidents. This was a period of quarrels and lawsuits between local authorities and motorists.

*Popular prejudice.*

In the second period, from 1895 to 1898, the peasants and people of country towns were brought round. They were made to believe that automobilism would bring about as great a revolution as railways had done fifty years before—that motor omnibuses would soon connect every village with the neighboring towns and that wealth would be multiplied.

This was the period of racing and record-breaking. Even the peasants grew enthusiastic. The first long-distance race of this period (Paris to Bordeaux and back,

*Auto-car racing.*

745 miles) was won by M. Levassor, on a carriage built by himself, in 48 hours 48 minutes, a feat of endurance. M. Levassor did not take a minute's sleep or rest for two days and two nights. These three years, 1895 to 1898, were a period of boom for carriage builders, and though they charged fancy prices they could not meet the demands of purchasers.

In the third period, from 1898 up till now, the weight, the speed, the power of carriages have increased every year, the peasant has been disappointed in his hopes, reckless driving has become a national nuisance, the highways are getting dangerous, and accidents are happening daily. The peasants' attitude is now one of sullen hostility. Government and local authorities issue regulations against fast driving, and an order was issued (in 1900) prohibiting racing, except by special permission.

*The Paris-Berlin race.*

The Paris-Berlin race on June 27, 28 and 29, 1901, marks a triumph and a collapse. When the hundred and ten competitors started from Champigny automobilism was still what it had been from the foundation of the Automobile Club—a sport. When the winners made their triumphal entrance into Unter den Linden it was a sport no longer, but a means of transportation. This evolution would have taken place sooner or later. A long time ago M. Giffard, the editor of the "Vélo," defined what automobilism should be in an epigram: "Non pas Sport, mais Transport." It was the running over the little boy at Rheims that precipitated the change.

*- a change.*



## THE CORONATION OF ALFONSO XIII

(A.D. 1902)

RICHARD HARDING DAVIS

THERE is a crown in Spain, but the King does not wear it. Unlike other monarchs, to become a king he does not have to wait until the crown is placed upon his head, but he is born a king. When, sixteen years ago, Alfonso the Thirteenth was passed around the ante-room to his mother's bed-chamber on a silver tray, robed simply in pink jeweller's cotton to be observed by the foreign ambassadors, he was then just as much of a king as when, in the Cortes, he laid his hand on the Bible and swore to observe the laws of his country.

The oath he swore is this one: "I swear to God on the Holy Gospels to observe the Constitution and the laws. If I do this may God reward me, if not, may He call me to account." At the conclusion of this brief oath, which the boy recited in a firm, clear voice, some one cried,

*The King's oath.*

"Viva el Rey!" and the entire gathering shouted "Viva" once. It rang like a salute of musketry.

There were a crown and sceptre on the table beside the King, but he did not touch them. The only other sign of a crown in the Coronation exercises was the one on the top of the carriage in which, after taking the oath, he rode from the Cortes to the Church of St. Francis to listen to the Te Deum. In this procession there were twenty-three state coaches, the carriage of the King, known as the Coach of the Royal Crown, bringing up the rear.

*The Royal  
procession.*

At the head of the procession were heralds in mediæval costume, mace-bearers, and mounted drummers with their silver kettle-drums flashing from either side of the pommel, grooms in white wigs, silk stockings and the court livery of three hundred years since, leading Arabian horses, with their empty saddles of velvet and gold; then the carriages of the grandees and the royal family. These were the state coaches. They rocked and swung on carved wheels, heavy with ormolu brass. The bodies were covered with enamel, tortoise-shell or gold leaf, on which were painted coats of arms and scenes and landscapes as exquisite as those on an ivory fan. The trappings were of red morocco and stamped Spanish leather. Postilions in jackets of gold lace rode the near leader of each of the six horses, a driver in a three-cornered hat and white wig was lost on a box-seat as large as a feather-bed and covered with a velvet ham-

mer cloth. On the heads of the horses and on the tops of the coaches were dyed ostrich feathers and plumes of gold. The interior of the coaches was lined with padded silk and satin. They resembled monster jewel cases on wheels, and as they moved slowly forward in the brilliant sunlight, and the horses tossed their plumes, and the jewel boxes rocked on their springs, they flashed like the fairy coach of Cinderella.

In form, the Church of St. Francis is circular, and surmounted by a great dome. Without the six small chapels which open upon it, it is much the same size as the rotunda of the Capitol at Washington. It has a very modern air. It is lighted by electric lights, and looks as though it had been lately gilded. The paintings on the walls and in the dome also have a modern look, and suggest Bouguereau, when he is most like Bouguereau. It was here the King listened to the Te Deum, but, except for the wonderful music, the scene had less the suggestion of a religious ceremony in a cathedral than of an audience hall in a palace. The back of the church was almost entirely hidden by royal princesses and the grandees, so that, instead of the altar, one saw only tiaras, bare shoulders, epaulets, and decorations. And in the body of the church the priests and bishops were entirely lost in the crush of foreign princes, members of the embassies, captains-general, admirals, and diplomats. The ladies of Madrid, wearing black mantillas, were seated in an outer fringe against the walls.

*A theatrical service.*

When the King entered the cathedral ten priests walked beside him, supporting over his head a canopy, heavy with silk and gold. But, not being in the habit of carrying canopies over kings, the priests allowed this one to droop and sometimes the fringe fell in front of the King's eyes and sometimes the canopy bumped him on the head. The Queen-Mother, who now, since within the last twenty minutes, followed behind the King, as she passed the tribune of the visiting strangers, could be heard expostulating with two priests, who were so overcome with stage fright that they were allowing their part of the canopy to brush the King's hair the wrong way. But finally the King, when he was half-way down the aisle, dodged from under the canopy and walked on ahead of it, leaving the ten priests struggling with their burden and hurrying to recapture him from the rear.

*Unre-  
hearsed  
effects.*

*Impressive  
Te Deum.*

At the church the music of the *Te Deum* was the most impressive feature of the ceremony. It swept from the choir loft, high over the heads of the people, across the great dome to the gallery opposite, where another chorus of voices and brass and string instruments rolled it back again. Only with an opera-glass was it possible to distinguish the singers and the musicians in the dome. They were so high above the people that the antiphonal chorus was like an artillery duel in the clouds. The music swept down out of the dark dome like a wave of thunder, silencing the whispering princesses before the

altar and reaching even the impatient multitude waiting outside on the sunlit tribunes. It was glorious music, noble, magnificent, tremendous, and as the thunder ceased, and from the painted saints and angels in the dome a single tenor voice rose proudly and jubilantly, the little King ceased smiling at the wax which dripped from a candle upon the epaulets of his equerry and, with his mother at his side, dropped to his knees.

The reception which followed the taking of the oath was notable chiefly on account of the beauty of the tapestries of the palace and of the decorations of its halls and corridors. It was also interesting on account of the shock it gave to visitors who had heard much of the strict etiquette of the Spanish court. To them it was surprising to see the King and the Queen stepping from their daïs and mixing in the crowd, talking and shaking hands with their Spanish friends. It looked much more democratic than a reception at the White House.

*Democratic  
reception.*


The review of the troops was notable on account of the excellent showing made by the cavalry and artillery. The latter, who came at the end of the long procession, passed the tribunes at a trot, which was quickened into a gallop, the guns of each battery passing as though made of one piece and the cavalry keeping a line which one seldom sees outside of military tournaments.



# THE CORONATION OF KING EDWARD VII.

(A.D. 1902)

SIR GILBERT PARKER

“UR Gracious King; we present you with this Book, the most valuable thing that this world affords. Here is Wisdom; This is the Royal Law; These are the lively Oracles of God.”

These were the words uttered by the Dean of Westminster while handing the Sovereign of Great Britain and Ireland and all his Dominions beyond the Seas the Holy Bible—the last act of the formal coronation of the King. *Final act of coronation.*

The oath had been taken, the anointing had been done, the spurs and sword had been presented, the armilla girded on and the Imperial mantle had been hung upon the King's shoulders. The orb had been given into his hand. The ring, the ensign of royal dignity, had been placed upon his finger. He had received the sceptre, the ensign of kingly power and justice. Solemnly he had been led to King Edward the Con-

fessor's chair, that ancient relic of England's sovereignty and might, and there the crown of pure gold had been put upon his head to a splendid outburst of acclamation, with the sounds of trumpets, while from outside came faintly the booming of guns and the clanging of bells. But the presentation of the Bible touched a note which was sounding softly in millions of hearts in the land and was deeply characteristic of this gorgeous ceremony—this tenderly religious service.

There were greater moments, more picturesque incidents, in this noble drama of the English Constitution than this which I choose for the pivot of comment, but in the midst of glamour and pageantry and glittering form, the bare simplicity of the words, their grave significance, brought the great scene into homely relation with the innate religious sentiment of this kingdom and this empire.

With this act, as much as with the celebration of the Holy Communion which followed, a great hush spread through this vast, beautiful temple, made even more beautiful by the thronging valor and intellect and nobility of an empire and consecrated by ages of solemn service and history to loftiest uses.

*Oath of  
allegiance.*

This scene was in fine contrast to that which followed, when the King, seated on this throne in the centre of the theatre on which the faithful Commons and their ladies, and the peers and peeresses of the realm, in robes of state, looked down, the Archbishop, as head of the



spiritual lords, and the Dukes, as heads of each order of temporal peers, touched the crown worn by the King, kissed him upon the cheek and swore allegiance.

Nothing was missing to give the scene its true meaning of thankfulness to Providence for the King's recovery and freedom from national anxiety for further security of constitutional life and the disproof of all prognostication.

This made the service in the Abbey probably the most notable event, not even excepting the Jubilee of Queen Victoria, which has ever taken place within its walls.

The whole interior of the cathedral was walled with seats—in galleries, chancel, transepts, aisles, and nave—like a theatre, and, strange to say, without marring its sacred appearance and character. As far as eye could see, from altar to western door, the place was terraced high with people. Give some vast opera-house treble its size, lend it the unpurchasable grandeur of architecture a thousand years old, make the people on the stage real people, a real king and queen and dukes and earls and heralds and kings-at-arms and standard-bearers; conceive the event to be the history of a people expressing itself at one solemn moment in ancient symbol and pious rite; see one man made the centre of the authority of the people, the expression of their will, the link in the chain of a nation's life which he himself did not make and can not destroy; surround him with brilliant, august ceremony; circle him with the heads of houses and

*Impressive  
aspect of  
the Abbey*

families of his kingdom as ancient as his own; place him thus high after a season of national storm and stress, after he himself has struggled back gallantly from the grave to a people's confidence, admiration, regard, and fealty—and you have a picture unparalleled.

*Pessimistic  
prophecies.*

How much prophecy has been proven false these past weeks, how much cheap clairvoyance there has been, how many wise folk said Edward would never be crowned—that cheap superstition of human nature which hangs on the heels of the world's great events.

Edward has been crowned.

They said—the sallow harbingers of trouble—that the Coronation would not be worth going to see. Had not all the foreign princes and potentates gone back again to their homes? Where would the splendor be had? So many of the Colonial and Indian troops returned whence they came. Was not the circle of imperial demonstration broken? Had not everybody left town? The Abbey would not be full, they said.

Well, what has happened? We did not miss the foreign princes and potentates, and the Colonial and Indian troops in large numbers challenged the admiration and regard and applause of hundreds of thousands.

Whatever else the people came out for, they came to see the prince whose life had lately hung in the balance and who in all his suffering proved himself as good a fighter as any of his subjects, and they acclaimed him

## A.D. 1902 CORONATION OF KING EDWARD VII.

as a brave man in the streets even as they acclaimed Kitchener and Roberts.

The foreign princes were missed—the show, the bravery of color, the international courtesy their presence would have expressed—for the people love kings and the livery of kings.

But what was missing then was made up by the wonderful gladness of the subjects of the sovereign at seeing in the streets, in his gold and crystal coach, drawn by the gayly caparisoned cream cobs, and on the throne in the Abbey in his imperial mantle, the sceptre in his hand, the King whose lamp of life burned but dimly a few weeks ago. *Popular enthusiasm.*

How splendidly he bore the ceremony! There was no sign of weakness or feebleness. Alert, composed, watchful, steady of step and strong and clear in response. During the two and a half hours of ritual in the Abbey, his robes and mantles heavy on him, there was no sign of the fight he had had, of the illness from which he had risen, save that he looked rather thinner than of yore, was somewhat fine-drawn and something wistful.

The Queen looked the more fragile, though she bore herself with a sweet, firm dignity and played her part with infinite grace, as did the Princess of Wales in her less important place in the proceedings.

There were several touching incidents in the ceremony, but one stands out very suggestively in the circumstances. When the Archbishop of Canterbury, whose *A touching incident.*

wonderful voice could be heard in every part of the great building, had enthroned the King, with the help of the Bishop of Durham and the Bishop of Bath and Wells, whose hereditary right it is to walk with the King and attend him at the Coronation, and had knelt and paid fealty, he swayed slightly and seemed unable to rise. He made an effort, and, with the help of the Bishops beside him, leaned over and kissed the King's cheek, according to ancient custom. Then he essayed to kiss the King's hand, and again he tottered with weakness and seemed about to fall. The King, with the quick kindness so natural to him, and regardless of his own recent weakness, caught the Archbishop's hand in his and assisted him to rise. Having done so, he kissed the Archbishop's hand gravely, and, still swaying and with great feebleness, the aged prelate moved slowly back to the altar, assisted by his attendants.

Another moment of compelling interest came when the Prince of Wales advanced to the throne to pay allegiance. Having knelt he came and touched his father's crown and then kissed him on the cheek. The King thereupon drew him down and, taking his head in his hands, kissed it solemnly, then shook his hands warmly several times, both deeply moved, as were all who saw. None was ashamed to-day to feel the emotional flood welling up, for it came from a nation's soul.

*England  
redivivus.*

It was a family party, a great national home-cooking—England's redivivus, the motif of the centuries repeat-

ing itself in this new overture of another act in the brave drama of progress and civilization.

Among those who were found in the procession of the King and Queen on this 9th of August were families whose representatives have walked in similar processions since the Coronation day of Richard II. Then an Edmund Earl of Cambridge, a Richard Earl of Arundel, now Norfolk, an Earl of Warwick, an Earl of Stafford, and an Earl of Salisbury, a De Percy, now Duke of Northumberland, a De Neville and a Grey de Ruthin did duty at the Coronation. To-day, heads of these same families—save that of Salisbury—were on duty beside the King and were in the noble group around the throne.

*Great  
houses rep-  
resented.*

Conspicuous in this circle were the Duke of Devonshire, the Duke of Norfolk, Earl Marshal, the Duke of Leinster, the Duke of Abercorn, the Marquis of Conyngham, the Duke of Marlborough, the Duke of Fife, the Duke of Argyll, whose father was on duty at Queen Victoria's Coronation; the Marquis of Londonderry, the Red Earl, Earl Spencer, the Earl of Crawford, the Earl of Shrewsbury, the Earl of Derby, the Earl of Rosebery, the Earl of Errol, the Earl of Cadogan, the Earl of Lucan, the Earl of Pembroke, and Mr. Arthur Balfour, Prime Minister of England.

Other names, once so familiar to English people, are no longer heard, though at Queen Victoria's Coronation they were royal titles; namely, the Dukes of Kent, Sussex, and Gloucester.

*Absence of  
Salisbury.*

To-day another name, another figure, was wanting to complete the circle and ancient service and splendid history of the great families of England—Lord Salisbury was absent through indisposition. One looked in vain in the noble group about the throne, magnificent in robe and coronet, part of a pageant of an antique world, with its constant service, for the massive frame and gray head of this Minister, whose loss to the government will be more clearly and deeply felt as time goes on. Lord Cranborne, his son, sat with his Countess in a front seat of the House of Commons gallery, but he has far to go before he finds a place and power such as his father gained and kept to the last. No Minister at Queen Victoria's Coronation was like him in weight, or prestige, or ability. Lord Melbourne, the then Minister, was more the sort of man that Arthur Balfour, the present Prime Minister, is—keen, fine, persuasive, logical, and of imperturbable temper—and to-day, as one looked at England's Prime Minister—tall, slight, clear-cut, modest, and calm, by comparison with the resplendent peers around him, so simply dressed in gold-laced coat and white-satin breeches—one received a sharp impression of the change come upon the government of the country. The younger men, the keener life, the less reserved, form the less impressive personalities, but perhaps a closer touch with the quick-changing temper and swift movements of public life of the twentieth century.

This impression was sharpened by seeing in the choir,

among the Diplomatic Corps, the tall, still dignified figure of the Chancellor of the Exchequer, Sir Michael Hicks-Beach, whose successor was announced this morning; by the sight of the Duke of Devonshire, whose successor was also named to-day. Salisbury, Devonshire, Hicks-Beach—the oldest and best of those who have served the state—they go forever, no doubt, and it was meet that two of them at least should add to the meaning and majesty of to-day's great function by their presence.

*Changes  
in the  
Ministry.*

Besides the group about the throne, among whom the Duke of Argyll was a most stately figure, and to whom the King handed his sceptre to hold during the Communion Service—an act of great royal favor—there were other groups splendid to see. Was it the occasion itself? Was it the lofty drama and ancient pageantry, the costumes and regalia of old heroic days, the heralds, the trumpets, the exquisite pages, the ritual which began when the kings of ancient Britain were consecrated and was carried on with increasing form and the same substance to Harold and William and Richard I. and Elizabeth and Charles, even to this day—was it any or all of these that made all the personages who took part in the ceremony bear themselves with such grace and befitting dignity, and made urbane and harmonious this play of plays, this solemn ratification of a nation's choice of kings? For he was chosen, duly elected by the people to-day, as has been the case since the olden days when

*A solemn  
election.*

the king to be crowned shut himself up in the Tower of London after succession, lest he might be dispossessed, until the Coronation, when he was solemnly elected by the people—and it was so to-day. King Edward was elected by the people:

“Sirs, I here present unto you King Edward, the undoubted King of this Realm; wherefore, all you who are come this day to do your homage, are you willing to do the same?” said the Archbishop of Canterbury in a voice heard distinctly to the western door; and a great shout, led by the massed choristers, cried, “God save King Edward!” followed by a fanfare of trumpets.

*Popular-  
ity of the  
Guelphs.*

This election has a greater significance in the democratic England of to-day than even in the days of King John, when Archbishop Hubert Waller insisted on his election that he might avoid the responsibility of crowning such a man. Kings exist in England by virtue of heredity, but they also exist by virtue of Act of Parliament, as witness the passing of the Stuarts and the advent of the Guelphs.

In old days a king was not really a king until he was elected and crowned, and so it was that eldest sons were sometimes crowned in the father's lifetime to avoid an interregnum. Such days have gone, and the Guelphs have nothing to fear at the hands of rival dynasties or from the will of the people. They are at last firmly allied with the history of the land and are close to the hearts of the people. With all their faults and mistakes, they



have been, on the whole, beloved. Even George IV. was immensely popular and to his last day could command the enthusiasm of the man in the street; and to-day the royal family showed to noble advantage. Over thirty Guelphs walked up the long aisle and through the great rood screen into the chancel and choir to take their places nearest to the throne, and royal grace and noble carriage marked their deportment throughout. Slow and stately they moved through the historic fane—Princess Christian, Princess Louise, Princess Henry of Battenberg, the Crown Princess of Roumania, the Duchess of Fife, the Princess Charles of Denmark, the Duchess of Sparta, the Princess Victoria of Wales, and those other noble relatives, the Duchess of Albany and the Duchess of Connaught, not less regal. Both come from kindred stock to the Guelphs.

So wonderfully was everything timed that in this varied and complex panorama every figure drew to its place, moved in its orbit with noble precision and grave accord. Nor were the young royalties behind their elders. The children of Princess Christian, of Princess Henry of Battenberg and the Duke of Connaught, smiling and composed, glided through the great vista of blue and gold, the cynosures of thousands of eyes, a long, graceful line which radiated in the sanctuary to high-appointed places. *Clockwork precision.*

No figure of them all was more revered than the Duke of Cambridge, none more beloved than the Duke of

Connaught—thorough, efficient soldier, quiet, high-minded gentleman, the King's right hand—but for the Princess May, now Princess of Wales, grown more princely with responsible years, and for George, Prince of Wales, straightforward, honest, shrewdly intellectual, become more royal of mien since his tour round the world; for the little manly Prince Edward of York—a future king also—was reserved an applause which meant more than the *vivat! vivat! vivat!* of the choir, or the music of Sir Frederick Bridge, Sir Walter Parratt, or Sir Villiers Stanford, to whom honor is due for an exquisite and noble service of music, and particularly to Sir Frederick Bridge.

*"God save  
the King."*

The cheering in the cathedral rivalled that spontaneous outburst of "God save the King!" started in the great stands outside the Abbey as the King issued from the west door and entered his state carriage with Queen Alexandra. The hymn poured down from those high-terraced pavilions, with their medieval form and structure and their antique hatchments, and was carried on to the Houses of Parliament stands and so on up Whitehall and on to the doors of Buckingham Palace.

It was thought, in 1838, a wonderful thing that seats for the procession sold at two-and-sixpence and three shillings; to-day they sold at from one to ten guineas. Then it was noted that the ladies took off their bonnets as Queen Victoria passed. To-day, if they did not take off their bonnets, they wore their hearts on their sleeves,

and sang and cheered and waved their handkerchiefs as bravely as the men.

There never was a more orderly crowd, never were arrangements carried out more satisfactorily. Everything worked without a hitch, and inside the Abbey there was the most absolute comfort, and the machinery worked as though it had been going ten years, so splendidly had the Duke of Norfolk and Lord Esher arranged everything and drilled all the officials concerned. In every sense the thing went on wheels. *Excellent management.*

Taking it all in all, the most striking remembrance I have of this pageant ceremony and national rejoicing is the moment when the crown was placed on the King's head and all the peers stood up and put their coronets on their own heads with as much precision and to as fine a dramatic effect as though they had been drilled by line sergeants.

But finer still was the scene when the crown was placed on the Queen's head and all the peeresses rose in their places and put their coronets on—hundreds upon hundreds of duchesses, marchionesses, countesses, and ladies in scarlet and ermine and ablaze with jewels, bared arms raised, adjusting the scarlet and gold circlets upon their heads behind the radiant tiaras they already wore.

My last impression is of the King walking slowly down the chancel, with the orb and sceptre in his hand, moving with an assured step and bowing to right and *Last impressions.*

*Leaving  
the Abbey.*

left, his purple robe carried by many pages, his crown glistening in the gaslight from the dark old pillars of the Abbey. The after view of him in his state carriage driving away with his Queen, affable and royal of mien, does not efface the other picture of him, proud and satisfied, met by a storm of cheers, as he made his way into the outer world of work and cares and high responsibility.

# THE NILE DAM AT ASSOUAN

(A.D. 1902)

FRANK FAYANT

THE First Cataract of the mighty Nile, which has roared and thundered through the ages, has been taken captive by English engineers. From out of the red granite quarries, where the ancient Egyptians, by patient and persistent toil, hewed their eternal monuments, a million tons of stone has been taken to dam the cataract. For four years an army of men has labored to erect a great granite wall to bind the turbulent floods that rush 3,500 miles through Africa from the Equatorial lakes to the Mediterranean. The shriek of construction engines, the pounding of restless pumps, the rattling of powerful cranes, has awakened the Land of the Pharaohs. The cataract of seven thousand summers has been blotted off the world's map, and in its stead has been created, by the genius of Twentieth Century engineering, a mighty reservoir, that sets back between the hills of Upper Egypt for 200 miles, storing a milliard tons of water.

*Blotting  
out the  
First  
Cataract.*

And why have men toiled and spent millions of treas-

*The thin  
green line  
of fertility.*

ure to raise this mile-long wall in the heart of dried-up Egypt? Is there something in the atmosphere of the ancient land that compels men to quarry the rock and raise monuments that will endure to the end of time? Without the Nile, Egypt would be as barren as the Great Desert. With the great river, fertile Egypt is but an elongated oasis, a thin green line on either side of the stream, from Alexandria up into the heart of Central Africa. This thin green line in the days of the ancients made Egypt the garden and granary of the world. And for thirty centuries men have struggled to widen this line. But all the mighty undertakings of the past—the building of dykes to bind the floods, the raising of great walls to hold them back, the digging of canals and basins to lead the water to the parched fields—have been but pigmy efforts compared to this last work, which, at a single stroke, increases the national wealth by £80,000,000.

*Value of  
water.*

For water is gold to Egypt. In flood it rushes to the sea at the rate of 15,000 tons a second, and 10,000 men are called out to drive it on. But when the crops are growing, the Nile is but a brook coursing through the rocks, and the law lays rough hands on the peasant farmer who, under shadow of the night, dips out an extra bucketful of drink for his thirsty crops. Now modern engineering attempts to save some of the summer flood, that the cotton and grain may not shrivel up in the torrid sun of the spring. It is cotton that makes



THE NIIHAMA DAM AT ASSOCIATED UPPER TOWN (1934)  
JPN. ARCH. EXHIBIT





modern Egypt a living land, for Egyptian cotton is known over the world as the best cotton grown. England has undertaken this great irrigation work in Egypt—of which the new dam at Assouan and the new barrage at Assiout are but the beginning—because England is vitally interested in the cotton trade.

Cotton is the backbone of the commerce of England. From around the world—from the Southland of America, from Brazil and Peru, from far-away India, from the country of the Nile—a mighty fleet of merchantmen is bringing to Liverpool the harvest of many millions of acres of cotton fields. The voracious spindles and looms of Lancashire use a third of the cotton crop of the world. England, thousands of miles from the nearest cotton fields, weaves cotton for the world. The plodding Egyptian, with watchful eye on the rising flood of the great river, tends his crops in a garment made, perhaps, from cotton he picked the season before; but the workers who made the cloth were in far-off England.

*Importance of cotton.*

The first cotton mill is yet to be erected in Egypt, but, with the added impetus given to Egyptian industry by the great engineering now being developed, it will not be long before agricultural Egypt will become manufacturing Egypt; and the long staple of the Nile Valley will be spun and woven in Egyptian mills by Egyptian labor.

English financiers have the strongest faith in the future of Egypt. For centuries Egypt was practically a

*Finances of  
Egypt.*

bankrupt country, but within the past few years, under able English administration, the finances of Egypt have been placed on a solid foundation. The best proof of this is found in the daily market quotations of Egyptian Government securities. The one man who may be well called the Financier of Egypt is Sir Ernest Cassel.

*The financier of the  
dam.*

Sir Ernest Cassel's greatest work in Egypt has been the financing of the new dam. For years Egyptian engineers have gone up and down the Nile Valley projecting on paper wonderful schemes of irrigation. Lakes have been formed, canals dug, and great barrages thrown across the river—all on paper. All of these fine schemes, which proposed to turn the desert into a garden, were brought before the Egyptian Government, and the rulers applauded the engineers. But, when it came to providing funds for the carrying out of these plans for the saving of Egypt, the government was silent. Although Egypt is now on a sound financial footing, its financial arrangements are most chaotic. Nominally the vassal state of the Sultan of Turkey, the independence of Egypt is guaranteed by the Powers; but the financial administration is practically controlled by England. When Sir Benjamin Baker, the distinguished English engineer of the Forth Bridge and the Central London Railway, placed before the Egyptian Government an engineering plan for the damming of the Nile at two points—six hundred, and two hundred and fifty miles, respectively—above Cairo, the government gave its approval to the scheme, which

*England  
in control.*

involved the expenditure of several million sterling. But the government was not able to pay for the work, except by small payments extending over a long period of years, and not beginning until the dams were in actual operation.

Undaunted, Sir Benjamin Baker went to his friend, Sir Ernest Cassel, and told him that several million sterling was needed to dam the Nile, and would he advance it? The engineer assured the banker that the project would be of inestimable benefit to Egypt, and that the two dams would rapidly pay for themselves in the greatly increased revenue they would bring to the Egyptian Government in water taxes. It did not take the banker long to decide. Four days later a contract had been signed with Sir John Aird, who is probably the greatest contractor in England to-day, to build the two dams within five years. Sir Ernest Cassel agreed to pay the contractor for the work as it was carried on, and an agreement was made with the Egyptian Government, by which payment for the work will be made to Sir Ernest Cassel in an annuity of £160,000 a year, the first payment to be made in July, 1903. That the Egyptian Government will not only be able to pay the annuity, but will profit immensely by the new dams, is more than assured by the fact that the barrage at Assiout, already in operation, is now earning enough to pay the entire annuity.

*Sir E.  
Cassel's  
enterprise.*

The dam at Assouan is a dam such as was never

*The wonderful dam.*

projected before. To build a great wall across an ordinary stream is merely a matter of labor, but to throw up a dam in the heart of a Nile cataract is a daring engineering undertaking.

*Engineering difficulties.*

"We had no idea of the difficulties we were to meet," said Sir Benjamin Baker to the writer, in describing the work at Assouan. "We were greatly hampered in the work at the beginning because of the uncertainties of the river bed. We had to crush one turbulent channel after another, to enable our thousands of workmen to go down into the bed of the river to excavate for the foundation. This work had to be done at High Nile to enable us to begin excavating as soon as the Nile subsided. In closing a channel, we first threw ton after ton of granite blocks into the cataract, and then we pitched in trainloads of rock, trucks and all. Gradually the rubble mound rose above the surface of the water. After the flood had subsided we banked this rock wall with many thousand bags of sand. What a task we had to get those bags! We used eight million, and we had to search all Europe for them. When the floods rose again we anxiously watched the excavation ditch protected by these walls of rock and sand bags.

*Rubble and sand.*

"We had a score of great pumps ready to draw out the water should it rush in, but so well had our sumps been constructed that two pumps were as many as we needed.

"When we finally got to work in earnest in the bed of the river, we found the task was a more formidable

one than we had imagined. The rock in many places was such as no engineer would think of building a dam upon. It was rotten rock that crumbled into sand under the pick. We worked down yard after yard looking for solid rock, and in some places we had to go forty feet below the bed of the river to find it. This enormous excavation, of course, greatly increased the cost of the work. When I saw that we would practically have to excavate a deep ditch through the river bed to get to solid rock, I told Lord Cromer I did not know how much it would cost, but it would be done. Lord Cromer said, 'Go ahead!'

*Rotten  
rock bed.*

The work was carried on night and day through the winter and spring before the flood came rushing down the valley. An army of native labor was thrown into the ditch. At one time 13,000 men were at work on the Assouan dam. Despite the unexpected engineering difficulties, the work has actually been completed a year ahead of time.

*Number of  
men em-  
ployed.*

If private companies could go into Egypt, build great dams and irrigation works, and receive the revenue that they would earn, all the Morgans and Carnegies and Rothschilds would be rushing off to Egypt to build dams; for a dam in Egypt is a bigger money-maker than an Atlantic steamship line, or a steel works, or a beef combine. Lord Cromer roughly estimates that the dam at Assouan, which has cost about £2,500,000, will increase the agricultural earning power of Egypt by

*Yearly  
revenue.*

£2,600,000 every year. That is, the Assouan dam, High Nile or Low Nile, will pay for its entire construction every year. Lord Cromer estimates that the actual increase in the government revenue, because of an irrigation of an added 1,600,000 acres of land, will be £380,000; so that the Assouan dam will not only pay twice over the annuity of £160,000, but it will give a surplus of £2,500,000 a year to the country.

[In 1903, Coronation Durbar at Delhi. First meeting of the new government opened in Pretoria. Hurricane in Society Islands (5,000 lives lost). Panama Canal Treaty signed at Washington (rejected by Colombia, Nov. 3, confirmed by the newly formed republic of Panama, Nov. 18). Protocols between Venezuela and the Powers signed in Washington. King Edward opened Parliament in state. First cable message received from Hawaii. Alaskan boundary treaty signed. Morocco imperial troops defeated. Blockade of Venezuelan coast raised. Chinese rebels massacre 500 imperial troops at Yang-Wing Pass. Protocol signed between United States and Venezuela for adjustment of claims. Popocatepetl volcano sold to an American syndicate. Work begun on Pennsylvania railroad tunnel in New York. Czar of Russia decrees religious liberty and local self-government. First through railroad journey across Asia and Europe from Vladivostok completed. President Castro of Venezuela resigns. Twenty-fifth anniversary of the

*Religious  
liberty de-  
creed in  
Russia.*

A.D. 1902

## THE NILE DAM AT ASSOUAN

Coronation of Pope Leo XIII. celebrated at St. Peter's. Mr. Chamberlain returned to England from his tour of the new South African Colonies. President Roosevelt made a speech in Chicago on the Monroe Doctrine and the need of a strong navy to support it. Chamber of Deputies consents to expulsion of religious orders from France. Tornados in Arkansas and Alabama. *Minnesota*, the largest steamship ever built in America, launched at New London, Conn. Massacre of Jews in Kishineff, Russia.] *Expulsion of religious orders.*





# MASSACRE OF THE JEWS IN RUSSIA

(A.D. 1903)

ARNOLD WHITE

THE massacre of sixty-one prosperous Bessarabian Hebrews reminds Christendom that the Jew, with his eternal claim for justice, is still sitting at the gate. The Kishineff butchery differs in no detail from previous demonstrations of nominal Christianity against a race, physically inferior, but intellectually superior; proudly exclusive, but driven to money-lending as a career. Precedents for Kishineff are to be found in every old country. Signs are not wanting that if something practical is not done by the Powers to settle the Jewish question, the Jewish question may yet settle the Powers. Already their power is that of mediæval Rome.

The situation of the Jews in Russia to-day is almost identical with that which they occupied in England 600 years ago. *Mediævalism in Russia.*

English statute law formerly provided that no Jew could enjoy a freehold. Seven hundred Jews were slain

in London on the plea that a Jew had forced a Christian to pay him two shillings a week as interest on a loan of twenty shillings. Lord James Hereford's Money Lenders' Act was anticipated in the Thirteenth Century by an English law which compelled every Jew lending money on interest to wear a plate on his breast signifying that he was a usurer, or to quit the realm. In 1290 nearly 17,000 Jews were banished from England, and other countries quickly followed her example.

*Banish-  
ment of  
the Jews.*

At the end of the Fifteenth Century several hundred thousands of Jews were banished from Spain, Portugal, and France, but they were favored in Holland, a country which by their aid prospered commercially until the decay of national ideals during the pursuit of material gain reduced her to the fourth rank of nations. The Jews were subsequently allowed to return to the countries from which they were expelled, but it was not until October, 1868, that Spain consented to receive them. In 1650 Cromwell allowed the Jews to return to England, and from that time to the present day Great Britain has experienced the truth of Heine's saying that every country has the Jews it deserves. If England can boast of the best and most enlightened Jewish community in the world it is partly because English freedom and sense of fair play have met with the reward they deserve, and partly because hitherto the Hebrews settled in Great Britain have been too few to raise in a serious form the question that inevitably arises whenever the clever but

timid few establish mastery over a muscular but stupid majority.

The pivot of the Jewish question in its modern phase was the partition of Poland. It was then that Russia acquired her Jewish population. Since the ten provinces of Poland were added to the Russian Empire the key to the Jewish problem is to be found on the banks of the Neva, not in London, Berlin, or Washington. During the first half of the last century the Jewish population in Russia was insufficient in numbers to rouse anti-Semitism. Oppressive laws against the Jews were partly suspended, and in 1862, under the Tsar Alexander II., additional political privileges were even granted to the Jews in Russia and in Poland. Persecution of Jews, however, was reported in Rome in 1864, at Bucharest in 1866, while the *Judenhetze*, begotten by Bismarck, opposed by Mommsen, Virchow, and others, and censured by the late Emperor Frederick, was born in Berlin in December, 1880. The German anti-Semitic League was formed and a petition was presented to Bismarck to restrict the liberty of the Prussian Jews. Almost immediately afterwards the Jews were severely persecuted at Kieff and at other places in South Russia. So great was the persecution in Prussia that the old Emperor William interfered to stop it.

*Polish Jews enter Russia.*

*Persecution of the Jews.*

Following German example a severe restrictive edict against the Jews in Russia was issued in May, 1882, but was not fully carried out; their civil disabilities were in-

*Severe  
edicts  
enforced*

creased. In 1883 there were violent attacks on the Jews in Presburg in Hungary, where martial law was proclaimed. There were also attacks on Jews at St. Petersburg, Pesth, and Zala-Egerszeg. In 1884 Russia appointed a secret commission under the presidency of Count Pahlen to inquire into the condition and rights of the Jews. Count Pahlen was a man of enlightened mind and humane temperament. The recommendations of the commission were not adopted, and in 1890 the severe edicts of May, 1882, long threatened, were fully enforced against the Jews in Russia. The first effect of the enforcement of this edict, generally attributed to Monsieur Pobedonostzeff's influence over the late Tsar, was to "round up" all the Jews who had been living in Russia proper and to drive them into the Ghetto of the Fifteen Provinces. This zone or pale was set apart by Russia in 1843 as a place outside which Jews were not allowed to dwell unless exempted by express authority from the operation of the law. This zone of the Fifteen Provinces includes a territory considerably larger than France. The "Novoe Vremya" in a recent article inquired: "What more do the Jews want than to live in a territory larger than France?" The answer is simple. The Jews of the pale are only permitted to live in towns, bourgades, and villages set apart for the purpose. They are not allowed to settle on the soil; to buy, own, or cultivate land. The consequence is that the actual space occupied by the Russian Jews, so far from being larger

than France, is smaller than the smallest French department. Since 1843 not an inch has been added to the territory set apart for the dwelling-place of the Jews; in the same period the Jewish population has quadrupled. So prolific are the Hebrew subjects of the Tsar that the Jewish population increases more rapidly than the Slavs, and the menace of the Jewish cradle is even more feared in Russia than the military genius of the British War Minister, or the shooting of our Home Squadron.

*Small territory for large population.*

So great is the pressure of the population upon the means of existence in the pale that of the 600,000 resident Jewish artisans there is not work for more than half that number. Wages run as low as fourpence a day; and so great is the destitution that many Jewish families—even the women—do not possess among them one single article of linen or cotton. A wealthy Jewish friend of mine recently founded a laundry in the town of Wilna. He told me that from investigations made into the condition of the Jewish population he found that even the women in many instances had no linen whatever, while as regards the men, one shirt would belong to a whole family. There was no Jewish linen to wash, and this is not from uncleanly habits but from sheer want. This absence of proper clothing is accompanied by perpetual privation in food. The stamina and power of lasting under adverse circumstances, characteristic of the Semitic race, enables the miserable and impoverished

*Poverty of the Russian Jews.*

Jewish population of the pale to exist on a diet and to withstand insanitary conditions of life which would destroy the peasant or artisan of Anglo-Saxon stock.

*A city of  
dreadful  
night.*

When I visited Berdicheff I saw what seemed to be a city of dreadful night. It is one dead level of gloom, decay and silence. The neglected streets are almost impassable from waterholes. Ordure lies untouched, festering in the sun or washed by the frequent rains. The very animals are affected by the blight that hangs over the town. The droskies and carts are falling to pieces, the ribs of the horses stand out. Emaciated dogs prowl about in search of food. The trade of the town is unable to afford sustenance to more than a portion of the population. The children are old and sedate; the men in long gabardines are ghoulish. In Berdicheff thirty or forty manufacturers might make a living. The number exceeds 500, while wages run as low as fourpence a day. Broken lattices, unpainted doors, peeling stucco, tell of the lack of hope. The filthy inn reeks with the stench of neglect. The only ray of hope comes from the synagogue and the doctor. Even the hospitals are converted into engines of oppression. At Homel I saw eighteen men and women suffering and dying together. Cases of cancer, puerperal fever, Bright's disease, meningitis, fracture, amputation, tumor, and fever lay huddled on dirty cubicles, irrespective of age or sex.

This is the Jewish question.

There are about five and one-half millions of Jews

in Russia, the majority of whom suffer the pangs of want and misery from inability to earn a livelihood. The sustenance they absorb, though sufficient for life, is insufficient for health. The inability of the Russian Jews to earn a livelihood arises from the pressure of the May Laws which debar them from resorting to the customary avocations of Russian subjects and drive them into channels of commercial enterprise which engender unpopularity and kindle the fires of anti-Semitism.

It is not from innate brutality that the Russian Government herds the Jewish pedlar, money-lender, and artisan into ghettos and restricts him from fishing, tillage, or market-gardening, but because the Russian Government deems itself compelled both by policy and by duty to protect the majority of the Russian population from contact with the astute, temperate, industrious, and money-loving Jew. The Russian peasant is a primitive creature. He is religious, faithful, brave, strong, and simple. He succumbs to temptations dangled before him in the shape of loans on terms he does not understand. Debtors in Russia, as elsewhere, are more numerous than the creditors. The law is on the side of the latter, but when men lose their all, an obsession of fury takes hold of them; they "see red" and seek the destruction of the ledger as evidence of the debt, and the murder of the creditor, who is as a rule their physical inferior. Men with muscle and the sword will not voluntarily pay tribute or come under the heel of the most intellectual

*The  
Russian  
peasant.*

race in the world if the physique of the latter is inferior to their own. The Bengali can pass examinations and the Moslem cannot; but if the English left India the Mohammedans would make short work of the money-lending babu.

*Russian  
brutality.*

This is the true origin of the Kishineff massacre. It is not sufficient to speak of anti-Semitism or of innate Russian brutality as its ultimate cause. Young girls were violated, children were murdered, Jewish corpses were eviscerated and stuffed with feathers by men who cared no more for the doctrine of the Jewish religion than for the practice of their own, and they were instigated to their fiendish work by those who hated the Jews for more practical reasons than those of race or creed.

*Aloofness  
of the Jews.*

The mere racial difference between the Jew and the Slav is not enough to account for the secular antagonism between them. There is as much difference between the Russian and the denizens of the Khanates as between the Russian and the Jew. But the difference between the latter cuts deeper. It touches the foundation of human society. The Russian does not desire the Jew as his brother-in-law, and the Jew proudly refuses to marry outside of his own community. Other races intermingle. The aloofness of the Jews in Russia is carried to a point which may be understood by Englishmen if they will study the language, the habits, and the customs of the foreign inhabitants of the ghettos which have been already established in our largest cities. One hundred and



twenty million Russians will never, while life remains, accept the domination of 6,000,000 Jews, whatever may be the claims of justice, or however mournful the wail of humanity. British editors who want facts might note this one.

The Russian case for restriction is accordingly by no means so impractical as we are led to imagine by Jewish writers in the English and American newspapers. If the barriers between the Russian moujik and the Jewish money-lender were thrown down, and the Hebrew subjects of the Tsar were allowed to compete at the universities, to mingle with the peasantry, and to enjoy all the privileges of Russian citizenship, one of two results would follow. Either every good place in the Empire would be held by a Jew in peace and quiet, and the peasant, by the mortgage of his property, would tamely transfer Russian soil into the hands of the Jewish community, or the Kishineff massacre would be repeated a hundred times over on a gigantic scale. Rather than share the fate of Holland, Russians would sacrifice every Jew in the Empire. This may be sheer wickedness, but it is simple fact. Even in India the Jews in the Civil Service are never spoken of as "Sahib" by the Moslems—always as Jew.

*Reason of  
Russia's op-  
position to  
the Jews.*

*Jews in  
India.*

These are the considerations that compelled Russia to set her face like flint against the representations of the Lord Mayor of London, in 1891, and to regard the con-

templated action of President Roosevelt in 1903 as calculated to injure rather than to benefit the Jewish cause.

[In 1903, the *Saginaw* sinks in collision off Fortress Monroe. Jews massacred in Bessarabia. Fire in Ottawa. Strike riots in Valparaiso, Chili. Anti-Hungarian revolt in Croatia. Prof. A. W. Goodspeed, of University of Pennsylvania, discovers that the human body emanates rays by which photographs can be taken in a dark room. Blizzard in Montana destroys \$5,000,000 worth of live stock. Conflagration at St. Hyacinthe, Quebec, destroys 300 buildings and renders 3,000 people homeless. Tornado in Southern Nebraska. King Alexander, Queen Draga, and their staff murdered in the Royal Palace, Belgrade, and a provisional government formed.]

*Murder at  
Belgrade.*

# A GLORIOUS REVOLUTION IN SERVIA

(A.D. 1903)

HERBERT VIVIAN

IN olden days all sovereigns, however much they might differ in questions of policy, however greedily they might covet each other's dominions, still recognized a practical brotherhood, a common interest in the maintenance of authority. Wrongs done to any one of their order were resented as an outrage to all; the demise of any Crown plunged every civilized Court into mourning. Now another spirit seems to prevail: save in Russia a mask of diplomatic indifference is worn in high places, and the expression of national sympathies is left to the man in the street. A bloody tragedy, almost unparalleled in the history of civilized man, has occurred in a European capital. A patriotic young King, his fair consort, his chief ministers, and his faithful servants have been butchered with inhuman atrocity; the murderers have gloried in their infamy; and a terrorized populace has seemed to acquiesce with decorated houses

*Diplomatic  
indiffer-  
ence.*

and blaring bands. No thrill of horror has been manifested by the "dear brothers" and "cousins" of the royal victims; on the very day of the holocaust, when the mangled corpses of a King and Queen were being exposed to the outrages of frenzied fiends, there was never a pause in the pomp and circumstance and revelry of European Courts. But the ghastly details of the deed have appealed to the melodramatic instincts of the vulgar, arousing a morbid indignation throughout every land.

What honest person could fail to be stirred by the story of the conspirators, sitting over their wine under the verandah of the Srbski Krupa, uproariously urging the gipsy band to play Queen Draga's March before they sallied forth to hack her to pieces with their swords; by the airy apologies of the baffled murderers when they roused a citizen for axes and candles, wherewith to track down their victims in the sleeping palace; by the thought of the ill-starred young sovereigns lying in their own gardens; riddled with bullets, sighing through the small hours for the long-delayed relief of death? In the pages of ancient or mediæval history, even in sensational fiction, such hellish horrors could not fail to arouse intense emotion: in the cold glare of the Twentieth Century they are brought home so vividly that we are almost eye-witnesses. The question remains whether democracy or oligarchy shall pass judgment; whether public sentiment or political opportunism shall prevail.

*The King  
and Queen  
assassinated.*

Under international lynch law, Servia would already have been put to the sword. But your sober diplomatist is ever eager to let ill alone. Times have changed since exaggerated rumors of repression in the Christian provinces of Turkey could stagger ministries or invoke European wars. Enthusiasm in high places is dead, and facts must be faced. The first of these facts is that civilized governments are moved only by self-interest, whether it be a chance of national aggrandizement or an instinct of self-preservation. But the peoples retain power to insist upon justice as well as injustice, and they must surely now raise their voices or for ever hold their peace.

*Self-interest the keynote of governments.*

The Servian outrage preaches many lessons in political philosophy. It presents the issue between anarchy and international action. Almost anywhere in Europe to-day, the humblest and most infamous are protected. To kill an armed burglar may be brought in manslaughter; injured honor can only be avenged by civil process. But a handful of besotted desperadoes may wipe out a dynasty, and the partisans of some obscure pretender will acclaim them as heroes.

*Lessons taught by the Servian outrage.*

Let us consider the career of King Alexander and Queen Draga, and even admit for a moment all the most heinous charges which have been alleged against them. To what do they amount? Let us hear the Devil's advocate. He may tell us that the King was autocratic, that the Queen was autocratic and immoral, that a conspiracy was afoot to proclaim her brother heir-presumptive. I

*Question of  
the suc-  
cession.*

do not believe any of these charges, but even if they could be proved up to the hilt, they would not justify massacre or even exclude pity. The question of the succession was an open one. For the House of Kara George, there remained no living descendant of an Obrenovich ruler. It was important to choose an heir, and every one was free to make suggestions as his conscience might prompt him. The Prince of Montenegro fostered a handful of partisans, but his election would have meant a subjugation of Servia, and those who resent autocracy would have found his little finger thicker than the loins of King Alexander. Prince Mirko was mentioned, and he possessed a claim as well from his own personal qualities as from his marriage with a beautiful and accomplished cousin of the Royal House, Mlle. Constantino-vich. Various old families, descended from the Voivodes, might have furnished plausible candidates. The question was so widely open that there could have been no treason in any suggestion, whether it came from the gutter or the palace. If the King and Queen did propose Nikodem Lunevitsa, it does not follow that they were unpatriotic. A woman will run risks, perhaps even sacrifice her honor, for the child of her loins, but who ever heard of one who went out of her way to invite odium for the sake of a brother? The fraternal relationship is sometimes friendly, but never romantic. When I conversed with Queen Draga, I was vastly impressed by her conspicuous common sense, a quality as rare as it is attrac-

*Queen  
Draga's  
common  
sense.*

tive in the fair sex. If she had not had confidence in her brother, she would never have dreamed of suggesting his succession. Assuming he was undesirable, he would either have become a conspirator during her husband's life or failed to hold his own when the time came for him to ascend the throne. She had nothing to gain unless he possessed the markings of a strong king.

Nor would King Alexander have assented to the nomination of an unsuitable heir. He loved his wife intensely, he was only happy when he pleased her, but he never sacrificed the good of his realm and people to her whims; nor indeed was he ever called upon to do so. I have seen him a hundred times, I have conversed with him intimately and I believed I gauged his character with some accuracy. He was above all things a patriot; he labored incessantly, unremittingly, with infinite pains and brilliant foresight, to do his duty to his people. He must have known his brother-in-law's character, and would never have dreamed of encouraging hopes of inheritance unless he was absolutely convinced of the young man's efficiency. That being so, the charge amounts to this: the King and Queen proposed to nominate an heir who was worthy of occupying the throne. It must be remembered that he came of an old Voivode stock, and was anything but an upstart. Many Servians have said to me that they welcomed Draga as their Queen because, instead of being an expensive alien princess, she was the offspring of their national heroes, the

*Character  
of King  
Alexander.*

*Queen  
Draga a  
true  
Servian.*

cherished patriotic ideas, she had simple tastes, and she could enter into the feelings of the nation whose blood was in her veins. What could be argued in her favor was equally applicable to her brother. At any rate, he would not come to them as a stranger, like the Princes of the Black Mountain, who were cousins rather than sons of Servia or the descendants of Black George, who had forgotten much and learned nothing during years of ignominious exile. To propose him to the national assembly as heir may have been a blunder, but it was certainly not a crime.

Likewise the clamors against the Queen were mere sporadic explosions of jealousy. In every country ruled by a young and charming Prince many hearts flutter with extravagant ambitions. A bevy of beauties adorned the Servian Court when Queen Nathalie presided over its destinies. If ever the King engaged one of them in conversation for a few minutes longer than another, all manner of rumors were instantly set afloat. Had he married a foreign princess, as the German Emperor arranged, his Queen would have commanded respect as a being of a superior caste, and assuredly if her blood had been shed it would not have cried for vengeance in vain. But when the news came that he had chosen a daughter of his own people to share his throne, a hundred damsels protested their own superior charms, wagging their tongues in impotent calumnies unceasingly. In ordinary life and ordinary countries, the expression of such dis-

*Character  
of Queen  
Draga.*



appointment is short-lived. But at Belgrade it gathered volume every week and month and year, though the simple, modest, genial Queen certainly did nothing to feed the torrent. She had her own views of political right and wrong, and her character was strong enough to support them. But no impartial critic could blame her public actions. As for her private life before she ascended the throne, it concerns no one but the King, who gave her his love, and the people who acclaimed her as enthusiastically as they now acclaim her butchers. Had she been the most abandoned of her sex in the days of her poverty, it were only charitable to pass the sponge of oblivion over her past, remembering only that she enjoyed the confidence of her consort, and shared, perhaps even inspired, his labors for the national welfare.

*Queen  
Draga's  
force of  
character.*

The charge of despotism is more important. She certainly exercised considerable influence over her loving lord: no one with her square chin and decided views could play the puppet even in an Oriental land, where the subjection of women remains almost an article of faith. In every Servian household, except the few diplomatic families, who have acquired exotic ideas, wives and daughters are expected to fetch and carry, remain standing in the presence of their men, and dine together on the fragments that remain after dinner. It is easy to imagine the horror likely to be aroused among men brought up in such an atmosphere when they heard that their King actually consulted his consort on the affairs

*Position of  
Servian  
women.*

of state, had even been known to take her advice. The shock to the nation would be infinitely greater than if all the slanders of disappointed damsels had been proved in open court. The fact that her counsels were wise and moderate and generous would in no way extenuate the enormity of her presumption in holding opinions at all. Open immorality might easily have been condoned, but character and courage in a woman were held to be positively indecent. Yet her influence was always on the side of harmony and kindness. King Alexander, like every one else, could not fail to realize the national need of strong government, but he made every allowance for the prejudice of his subjects. His ear was always open to any man or party with a grievance; he was readily accessible to all classes, and listened with the utmost patience to every suggestion; and the mass of the people was by no means ungrateful. Wherever I went in my travels through the country, I heard nothing but good of him; praise of his tact, admiration for his talents, enthusiasm for his warm heart and personal charm.

*Popularity  
of King  
Alexander.*

The late revolution was not the handiwork of Servia. It was engineered by the low cunning of a handful of discredited ruffians. Examine the list of conspirators and provisional ministry: not a single name is associated with an honorable career or any deed of distinction. Jail-birds, bankrupts, needy lawyers, and gutter journalists are the new rulers of Servia, maintained in parlous authority by a gang of drunken young officers, half-maddened by

*The low  
perpetra-  
tors of the  
crime.*

their taste of blood. We are not to believe that the nation, or even the army, participated in the recent crime. The nation knew nothing of it until the whole tragedy was over. Then a reign of terror set in and the unarmed populace was impotent to protest; even the decencies of mourning were forcibly prohibited and orders were carried out enforcing signs of hollow joy. In every town and village the prefects and their subordinates were compelled to do the work of regicides and coerce opinion. It is impossible not to marvel over the diabolical craft which has ordered the after-effects of the holocaust. No man in Servia could call his soul or his thoughts his own. The faintest show of disapproval would have meant instant death ! I know that at least twenty private citizens were put to death in Belgrade within the first few days of revolutionary rule. The simple procedure was to enter a man's house, shoot him through the head, and then calmly announce that he had committed suicide for some disgraceful reason. The whole story reads like a grossly improbable romance. I could understand a people being terrorized by a determined army, but it seems almost incredible that a people and an army should have been so completely overawed by a few hundred desperadoes. None of the superior officers knew anything of the plot; the privates had to obey orders when they surrounded the palace, and, until the deed was done, they probably imagined that they had been called out to protect their King. Even when they learned what had

*A reign of  
terror.*

happened, they were without leaders or initiative and were forced into a sullen acquiescence. Many officers were horror-struck when they heard what had happened, but it was too late to do anything, for all the army organization was in the hands of the conspirators. One faithful Colonel, Miloslav Zhivanovich (let his name go down to posterity), was found to have warned the King. He was shot in cold blood, and the news went forth that he had committed suicide in consequence of pecuniary troubles. Another officer, Lozar Jovanovitch, who refused to rejoice over his master's murder, was run through the body, and his assassins announced with grim cynicism that he had killed himself in mortification because he was deemed unworthy to participate in the "gallant deeds" at the palace. When the thanks of Parliament and the blessings of the Metropolitan are showered upon the "brave Servian army," those insults are not directed to the nation under arms, but to a small clique of criminals.

Not content with taking King Alexander's life with revolting savagery, the criminals set to work to traduce his memory. They remind me of the regicide Harrison, who said of King Charles I., "Let us blacken him." Mashin and his fellow-murderers have expended infamous ingenuity in blackening their royal victim. King Alexander died fighting for his Queen; they represent him cowering in a cupboard. He was a Prince of singular wisdom and prudence; they suborn physicians to

*Blackening  
the royal  
victims.*

declare that his brain betokened incipient lunacy. They have gone on to discover all manner of compromising documents, which they had evidently forged and themselves placed in the Palace. Journalists and historians are often too ready to accept the first story that comes to their hands. In judging of calumnies against the unfortunate victims of the Servian tragedy, they will do well to hesitate before they receive the tainted evidence of crafty criminals.

[In 1903, floods and conflagrations do widespread damage in Kansas and Nebraska. Tornado wipes out Gainesville, Ga. Prof. W. Markwald, of Berlin, exhibits his newly-discovered metal, polonium. Explosion at the lyddite manufactory, Woolwich. Prof. Curie lectures at the Royal Institution on Radium. King Peter Kara-georgevitch, the newly elected King of Servia, enters Belgrade after an absence of 45 years. Khedive of Egypt visits Sir Ernest Cassel in London. Railway accident in Spain on the Najerilla River (200 lives lost). Visit of M. Loubet to King of England. King Edward entertains officers of the U. S. Squadron at Buckingham Palace. *Death of Leo XIII.*]



## LEO XIII. A RETROSPECT

(A.D. 1903)

WILLIAM BARRY

**A**MID tokens of world-wide sympathy and profound admiration, Leo XIII. has passed away. He belonged to a remarkable group of sovereigns and statesmen, including Mr. Gladstone, Prince Bismarck, and the Emperor William of Germany, whose vigor lasted down to extreme old age and whose period of active life bridges the interval between our own day and the far distant times of Napoleon. That the late Pope in his twenty-five years accomplished a momentous work has been admitted on all hands. Critics by no means partial to him acknowledge "the blameless life, the lofty ideas, and the indomitable moral courage" that were to Catholics a subject of legitimate pride or devout veneration. It is even granted that, thanks to his diplomacy, the Vatican wields an "influence in international politics which it has not possessed since the Middle Ages."

*Statesman-  
ship of Leo  
XIII.*

He succeeded in pacifying the great Protestant Empire; he recovered the confiscated revenues of many

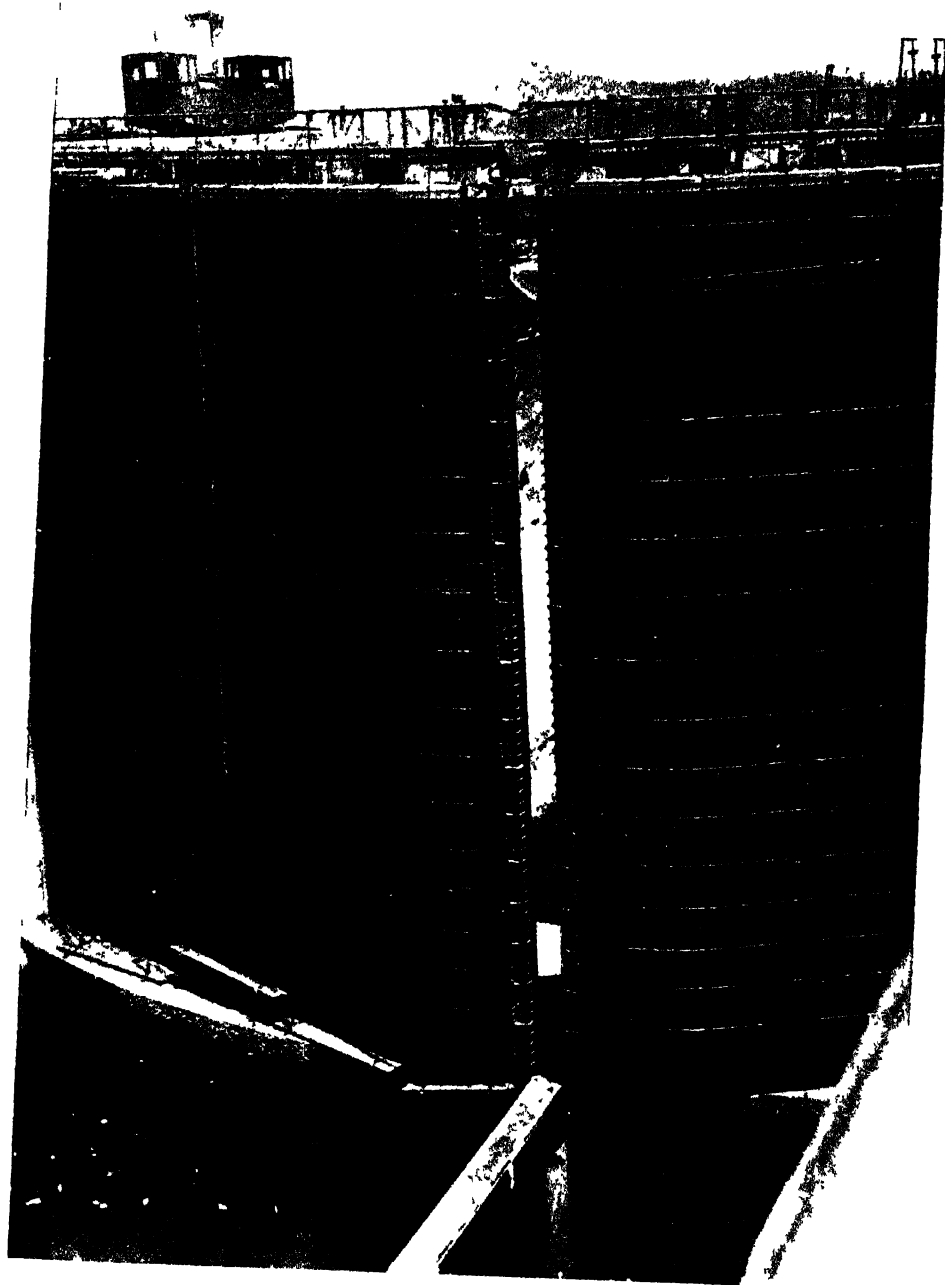
years; he was on terms of friendship with William I. and Frederick III.; and at last of affectionate intimacy with William II. Men were not a little touched, as the Pope lay on his death-bed, to hear that the German Emperor had publicly offered up a prayer for his restoration. When we think of another Leo in 1520 and of Luther burning the Papal Bull at Wittenberg, we find such an incident significant of great changes. The Kulturkampf has ended in a reconciliation, which, whether at Rome, Strassburg, or even Jerusalem, promises well for the peace of religion that is yet to come.

For all this Leo XIII. deserves to be held in everlasting remembrance. His action may have been daringly political; his motives were such as become the *Servus servorum Dei*. But when he turned to France, the questions which confronted him were of appalling magnitude and difficulty. France was the foremost of Catholic powers, yet in its government the spirit of a persecuting Atheism had prevailed since the failure of the Royalist *coup d'état* on May 16, 1877. Acting on Gambetta's dictum, "*Le cléricalisme, voilà l'ennemi*," M. Jules Ferry proposed and carried his famous decrees of 1879 by which every religious congregation in the land was to be broken up.

Royalist  
coup d'état  
on May 16,  
1877.

In a letter to M. Grévy, May 12, 1883, Leo deplored the banishment from the public schools of religious teaching, which was also excluded from the hospitals, the armies, and the charitable institutions of France. He





ONE OF THE GIANT GATUN LOCKS IN THE PANAMA CANAL (File 383)  
FROM A PHOTO RAIL



could not but lift up his voice against the new law of divorce. He was grieved that the clergy should be taken from the holy place to serve as common soldiers, while they were not permitted to exercise their sacred duties as chaplains or almoners. M. Grévy replied that the clergy had themselves to thank if anti-religious passions had been aroused: were not large numbers of them hostile to the Republic from its beginning? To this the Pope answered in February, 1884, by his remarkable letter, "*Nobilissima Gallorum gens.*" It made a deep impression; but domestic strife continued; the name of Dupanloup, whose life had just been published, was a signal for fresh combats; and the Cardinal of Paris summed up five years of incessant attacks on faith and morals in a melancholy but ineffective appeal to the President. What could be done to arrest the ruin of Christian France?

*Leo XIII.  
and  
France.*

Catholics must accept the new order as a fact, and make the best they could of it; such was the conclusion at which Leo XIII. arrived in 1885; such was the practical issue of his teaching in the *Immortale Dei*. He would not put an end to the Concordat. He held by the union of Church and State as in principle necessary.

In France every one asked whether Leo XIII. had inspired or permitted the Cardinal's action. It was known before long that he approved of it. The new Secretary of State, Cardinal Rampolla, wrote in November to the Bishop of St. Flour, that French Catholics

would do well to acquiesce in the situation and imitate the conduct of the Holy See. In reply, the five French members of the Sacred College accepted the Republic, but protested against its encroachments on spiritual territory. To them Leo addressed an epistle, written in their own tongue, which left no room for hesitation (*Au milieu des sollicitudes*, Feb., 1892).

Social  
unrest.

From what we have said it will appear that Leo XIII., in recognizing the French Republic and urging on Catholics the duty of citizenship, could appeal to principles and precedents which have in them no taint of Jacobinism. But a situation full of trouble was laid open when the political problem had thus been happily solved. The last quarter of a century bears in many ways a resemblance, which cannot fail to strike thoughtful students, to the years of Socialist propaganda before 1848. Rights of property; wrongs of proletarians; progress and poverty; the iron law of supply and demand; the living wage; the housing of the poor; the Sunday rest: we have been working on this treadmill as others in their time, from Lamennais and Pierre Leroux, from Saint Simon and Robert Owen, to Lassalle, Karl Marx, and Henry George.

On all hands Leo XIII. set up schools, seminaries, and universities, from Washington to Fribourg and Beyrout. To English Catholics he threw open Oxford and Cambridge. He founded in Rome National Colleges. He unbarred the Vatican archives. In calling up John Henry

Newman to the Sacred College he was not only distinguishing a saintly and most winning personality, but extending the protection of the Holy See to works at once original and profound, which are telling more and more upon the development of apologetic literature. His encouragement of Oriental research was a step in the same direction. Significant also was the naming of a commission to guide and control Bible studies, now conducted on lines rather of archæology and criticism, than of Patristic exegesis. The Holy Father took a deep interest in all that regarded the Churches of the East. But his Constitution *Orientalium* marks a return to the ideas of Benedict XIV., who dealt tenderly with these ancient memories. Our Liturgy has been enriched with many offices, binding Rome with Alexandria and Jerusalem, or exhibiting in their devotion to the Holy See men like SS. Cyril and Methodius, the founders of Slavonic literature and civilization. And if the Pope could not, in like manner associate the present Anglican Church with Roman orders, or recognize its hierarchy, at least he convinced Englishmen of his goodwill toward them in documents which breathe a spirit of sincere religion, as many have felt and acknowledged who are outside the orthodox pale.

*Activities  
of Leo  
XIII.*

We make no attempt even to summarize the endless activities of a ruler who founded some two hundred and fifty bishoprics, signed over twenty concordats, and touched on every question as it arose, from agrarian

*The  
Church in  
France.*

troubles in Ireland to the religious needs of Japan; from "Christian Democracy" to "Americanism"; from the slave-trade in Africa to the establishment of diplomatic relations at St. Petersburg. The perplexed and ever more grievous condition of the Church in France would demand a volume to itself. The Temporal Power, though no longer in existence, has determined a whole series of vicissitudes in European politics. Every country has claimed attention from this great ruler, whose strength appeared to be as inexhaustible as his vigilance was un-sleeping.

*Early life  
of Pecci.*

Pius IX. saw the old order come to an end; Leo, with his measuring-rod, traced the new. Politics, in some high Christian sense, were the special province of a man who represented, like Innocent III., the genius of Roman Law, and whose training had been from early youth among aspirants to the Curia. Vincent or Joachim Pecci was a Volscian of Carpineto, not very distinguished in point of birth; educated first in the Jesuit school at Viterbo, and afterwards at the Roman College, where he was remarkable for his elegant Latin and his brilliant display of logic. He had been admitted to the Collegio dei Nobili; at the Sapienza he became Doctor of Laws. In 1837 he received the mantle of a Monsignore; and in February, 1838, he was named Governor of Benevento. It is well known that he put down brigandage in this unruly district with a strong hand. Gregory XVI. sent him to Perugia in the capacity of legate, and then

of bishop; but an excursion beyond the Alps, as nuncio to the Court of Brussels from 1843 to 1846, enabled him to catch a glimpse of London and Paris, while it facilitated an acquaintance with the French language that told upon his reading by and by. He was not, however, proclaimed Cardinal until 1853; and he spent in his mediæval palace on the Umbrian hill no less than thirty-two years of almost unbroken seclusion.

Negative conditions had been clearly laid down by Pius IX., but there was need of a constructive policy which must take into account the changes of a hundred years. When that unexampled reign ended in February, 1878, the Holy See had lost its temporal dominion; it was at variance with the French Republic, as well as with Russia and Germany; the Kulturkampf had been raging for years; there was an Armenian schism in the East, an old Catholic party in Bavaria, Baden, and Switzerland; the Freemasons governed in Belgium; and at Monte Citorio laws were passed which hampered or impoverished the Church in Italy. Pius IX. has been compared to Louis XVI., and in some respects not without cause. He was equally well-intentioned, as he was equally unfortunate. But the chief point of resemblance is that both witnessed the downfall of an ancient order of things. In Papal history 1870 corresponds to 1789 at Versailles. Whatever comes after these dates in their respective chronicles belongs to a new age, divided from

*Position of  
the Holy  
See.*

the old by a revolution in the thoughts, the spirit, and consequently in the laws by which men are directed.

Who should succeed Pius IX.? Outside of Italy no name, except perhaps that of Cardinal Bilio was familiar to the public. But observers at hand, among whom Ruggiero Bonghi held a memorable position, had fixed on the Bishop of Perugia; and, still more significant, had prophesied the coming alliance between the Church and Democracy. How in September, 1877, Cardinal Pecci was made Camerlengo, thanks to the strenuous efforts of certain of his colleagues; how the King died at the Quirinal and the Pope at the Vatican within a few days of one another; how the Italian Government took measures to insure the freedom which was indispensable to the Conclave; and how, after three scrutinies Leo XIII. was elected by forty-four votes out of sixty-one—all this we may read in the current biographies. The new Pontiff was entering on his sixty-eighth year; neither himself nor the Sacred College anticipated a long reign. But opinion, Protestant no less than Catholic, ratified the choice.

*Cardinal  
Pecci made  
Camer-  
lengo.*

*Cardinal  
Pecci is  
elected  
Pope.*

Before long the world was considering with extreme curiosity a figure which recalled the great Italian Popes and politicians in their most characteristic features. Slight, pale, with burning eyes and slow gesture, Leo was neither an impromptu speaker, like his predecessor, nor quick as he had been at repartee, nor personally so attractive to Romans or strangers. But he had the



strength which comes from self-control, inspired by a clear view of principles. He wrote a delicate and suggestive Latin; he knew his Dante by heart; he was an Umbrian, one might almost say Franciscan, whenever he touched on the Middle Ages; and his philosophy was drawn from the Angelic Doctor whose vivid light sheds a charm on the world of abstractions amid which he moves. As regards German thought, English or French literature, and the way in which Anglo-Saxondom manages its affairs, the Pope could learn what was needed only from experts; his training had not carried him in these directions. Diplomatic by temper, he saw the situation, as Italians commonly see it, without haze and subject to no misgivings. But St. Thomas had taught him the art of distinctions, while any adjustment with present circumstances required a willingness to treat which had never been foreign to his temperament.

*Talents  
and charac-  
teristics of  
Leo XIII*

That the Church must be governed on a policy of some kind, which cannot fail to influence nations as well as individuals, is obvious from her history and constitution. But it should be no less evident that, whatever may be thought of such an *Imperium in imperio*, she is utterly dependent for its maintenance on the moral forces at her disposal. When Leo took possession of the Vatican, he had nothing to rely upon except the belief of Catholics in their Supreme Pastor, and the effect which they chose to give it by their public or private action. During his reign, the second longest in an aston-

*Not a  
sword  
drawn in  
the Pope's  
behalf.*

ishing history, not a sword has been drawn on his behalf; Europe, with a cynical disdain for justice, has declined even to guarantee the Pope's independence. He may be shut up in his palace or thrust out of it by a troop of *bersaglieri* when the Italian Government shall so decide. Without fleets or armies, with no assured revenue, protected by none of the Great Powers, Leo found himself at the head of a Voluntary System in which he could not move a step unless the people went whither he directed them. He was a preacher of righteousness, and he could be nothing more.

[King Edward and Queen Alexandra visit Ireland. Cardinal Sarto, Patriarch of Venice, elected Pope (Pius X.). International Conference on Wireless Telegraphy opened in Berlin. Trial of the Humbert family begun in Paris. Coronation of Pius X.]

## THE NEW PONTIFICATE

(A.D. 1903)

J. MOYES

AT ten minutes past four on the afternoon of Monday, July 20th, Leo XIII. breathed his last. On the evening of Friday, July 31st, the Cardinals, sixty-two in number, entered into conclave, and in the forenoon of Monday, August 4th, at noon, at the seventh scrutiny, it was found that Cardinal Joseph Sarto, Patriarch of Venice, was elected. The white *sfumata* gave the signal to the world outside, and Cardinal Macchi presently announced the election from the loggia of St. Peter's in the traditional form:

*Magnum gaudium annuntio vobis. Papam habemus Reverendissimum Dominum Cardinalem Josephum Sarto, que sibi nomen imposuit Pius Decimus.*

Thus, after a conclave of less than three days, carried out with vigorous observance of the wise and stately regulations with which the Church safeguards the Sacred College in the discharge of this, its highest function, and under conditions of liberty, solemnity, dignity, and piety, which left nothing to be desired, a new chief

*The Papal  
Conclave.*

pastor was given to the Church and a new name added to the majestic roll of the Vicars of Christ, which spans the centuries from the days of Pentecost to the present time.

The new Pope, like many of his illustrious predecessors, is of humble origin. In his elevation to the most sacred and most exalted dignity upon earth, the Church, true to the example of her Founder, has shown herself "no respecter of persons." She has too profound a sense of real greatness and of the stupendous importance of the issues at stake to have time to think of those puny considerations of social caste, to which minds of the small and worldly type are apt to attach importance.

Giuseppe Sarto was born on June 2, 1835, at Riese, a small village of some 800 inhabitants. Riese is in the diocese of Treviso, and the cathedral city of Treviso, with some thirty thousand inhabitants, lies about seventeen miles north of Venice. His father was a minor municipal official and his relatives are still innkeepers or shopkeepers of humble and honest standing. In his earlier years, Giuseppe Sarto was sent by Don Tito Tusarni, his parish priest, to school at Castelfranco, to which he walked daily on foot from Riese. Later on Cardinal Monico and Mgr. Farina, Bishop of Treviso, obtained for him a place in the diocesan seminary of Padua. On the 18th of September, 1858, he was ordained priest. For nine years he was made parish priest of Salzano, where he labored for nine years more. Both

*Early life.*

at Tombolo and Salzano he is said to have been idolized by his parishioners, and to have been remarkable by his practical sympathy with the laboring poor and the intelligent zeal with which he entered into their difficulties, and not only helped them, but did what was still better—taught them to help themselves. Mgr. Zinelli, the Bishop of Treviso, used to say of him: “I have never known a thinker or a writer more ready and more industrious.” In 1875, in recognition of his services, he made him canon and chancellor of the diocese. Impressed by his intelligence and priestly spirit, the bishop entrusted to him the office of spiritual director and religious instructor in his diocesan seminary. Thus, after eighteen years of training in the parochial ministry, he was called to the practical work of the formation of the clergy. On the death of Mgr. Zinelli, he was appointed Vicar-Capitular, and had his first experience of the government of a diocese. His administration was a marked success, and on November 10, 1884, he was appointed Bishop of Mantua. The diocese is said to have been transformed under his stimulating rule and influence. It was at Mantua, in 1886, that he presided with distinction at the festivities organized for celebration of the centenary of St. Anselm, and he was brought into sympathetic touch with one of the great glories of our Catholic past. The conspicuous ability and merit of the Bishop of Mantua did not escape the vigilant eye of Leo XIII., who forthwith marked him out for a higher eminence and

*Sarto be-  
comes  
Bishop of  
Mantua.*

*Cardinal  
and  
Patriarch  
of Venice.*

a wider sphere of labor. He was summoned to Rome, and on June 12, 1893, was made a Cardinal of Holy Roman Church, under the title of San Bernardo delle Terme, and three days later, June 15th, was created Patriarch of Venice. At Venice, his charity, tact, and affability made him unboundedly popular. His influence made itself most happily felt, both in raising the tone of ecclesiastical spirit and discipline, and in winning the masses of the laity to the cause of the Church. When King Humbert and Queen Margherita visited Venice, the Cardinal went in his gorgeous gondola to pay them his respects; and as recently as April last (1903) he blessed the foundation stone of the new Campanile in the presence of the Count of Turin and Signor Nasi, the minister of public instruction, and in the course of an eloquent speech made a graceful allusion to the historic glories of the House of Savoy.

It is thus by nine years' life and work as a simple country curate, nine years more as a parish priest, nine years more as a bishop, and ten years more as a cardinal patriarch that Pius X. has mounted to the august eminence of the Chair of Peter.

As to his personal character, there seems to be, as far as we can gather from both the home and continental press, a wonderful consensus and ready witness as to the estimable qualities of which he has given proof in the various places in which he has lived and labored. He seems to have been as dearly loved by the citizens of the

"Queen of the Adriatic" as by his poor *contadini* at Tombolo. To make a small *cento* of these published testimonies, he is described as "a man of personal fascination and splendid presence"—"a man of fine physique, a handsome open face, with clear cut, powerful features, softened by eyes in which is the light of perpetual youth, reminding the observer of Pius IX. whom he also resembles in his candid, unassuming expression, brightened by a twinkling humor about the lips"—"an early riser and a hard worker"—"a diligent student"—"a zealous but tactful disciplinarian"—"an excellent administrator and organizer"—"one who has high ideals of priestly life and clerical decorum"—"remarkable for great goodness of heart, charity, sympathy, blameless life, and profound piety"—"distinguished by charming frankness and simplicity, remarkable modesty, winning affability combined with wonderful firmness, which makes him absolutely uncompromising in all that concerns the faith or the rights of the Church"—"one who has great kindliness of heart with quite a passionate interest in the social question and the betterment of the life of the laboring poor"—"a good preacher, and one whose sermons are eloquent by their unction and solidity of matter, rather than by any devices of rhetoric or oratory"—"one possessed of much suavity and charm of manner, with a dislike of pomp or show, but uniting a certain stateliness and dignity with graceful ease of address and a delightful sense of humor"—

*Personal  
charac-  
teristics.*

*Kindness  
and gener-  
osity of  
Pius X.*

"one who preaches the gospel of personal culture, and puts cleanliness next to godliness, and good manners next to good morals, setting an example in these things by his own refinement and old-fashioned courtesy of manner." These are indeed but snapshots of character taken by journalists who regard the new Pope from very varied points of view, but they are the echoes of deep impressions which have been left upon the hearts of a people who have known and loved him for more than half a century. If one trait of his disposition may be singled out as predominantly characteristic, we note that all seem to agree that he brings to the Papacy a heart full of Christ-like sympathy for the laboring and suffering masses. "He has compassion on the multitude." More than once he has thrown himself as an apostle of conciliation into the disputes between capital and labor. In the great strike of the cigar-makers in Venice, which threatened such injury to the trade of the city, and such stress of suffering and destitution to multitudes of the people, it was mainly by his tact and zeal that a settlement was happily arrived at, and a restoration of peace and goodwill established between employers and workmen. His charity in Venice is proverbial. It is said that his alms-giving is so unmeasured that his steward or *Economo* has had to put him on an allowance. The allowance, which ought to last for the month, is generally like a schoolboy's pocket-money, gone in three days. It is well in keeping with the character of one who



was called to the Chair of his great fellow-countryman, St. Laurence Justinian, that more than once the episcopal ring of the chief pastor of Venice was in pawn, in order that the cry of indigent poor should not be left unheeded.

[In 1903, an accident on the underground railway, Paris, killed 84 people. Balkan revolutionary war begun. Gen. Nelson A. Miles retires from army service. House of Lords passes Irish land bill. Dr. Jean Charcot's French Antarctic Expedition sails from Havre. Edison perfects a new style phonograph. Russian fleet ordered to manœuvre in Turkish waters. Death of Marquis of Salisbury at Hatfield. Humbert trial concluded, M. and Mme. Humbert found guilty of swindling and imprisoned for 5 years. Report of Royal Commission on the South African War published, revealing a dreadful complication of mismanagement, muddle, and incompetence. International yacht races between Sir Thomas Lipton's *Shamrock III* and the American defender *Reliance*, the American leading. King Edward visited the Emperor Francis Joseph. Third race between *Shamrock III.* and the successful *Reliance*. The *Deutschland* breaks westward record across the Atlantic (5 days 11 hours 54 minutes). Annual meeting of British Association; Mr. Balfour elected President for 1904. Stanley Spencer tried to sail his balloon from the Crystal Palace to St. Paul's and back. Mr. Chamberlain opens his campaign of fiscal reform.

*Balkan  
Revolutionary  
War  
begun.*

in Glasgow. S. F. Cody, inventor of the war-kite, crossed the Channel from Calais to Dover in his collapsible kite-boat. The Seychelles proclaimed a separate colony. President Roosevelt received Señor Varilla as Minister of the Republic of Panama. Battleship *Maryland* launched. Count de la Vaulx and Count d'Outremont travel in an airship from Paris to Hull. Chinese-American commercial treaty signed. Fire in Vatican. Visit of the King and Queen of Italy to King Edward. New Panama Canal treaty signed in Washington.]

*New  
Panama  
Canal  
treaty.*

# THE SECESSION OF PANAMA AND THE PANAMA CANAL

(A.D. 1903)

BENJAMIN TAYLOR

ALTHOUGH it is extremely doubtful if "Stout Cortez," with or without all his men, ever did stand "silent upon a peak in Darien," one can be tolerably certain that Simon Bolivar would not have been "silent" had he been there on Nov. 3, 1903. For on that day a limb was torn from the constitutional tree which the great Liberator planted on the soil of the old Spanish kingdom of New Granada. That kingdom had lasted for over a hundred years, under Spanish rule, before Bolivar emancipated the country and founded the Republic of Colombia, which was a confederation of the States of New Granada and of the Provinces of Venezuela. This confederation was in 1819, and Simon Bolivar, as President, established himself at Bogotá, a city which has the disadvantage of being hundreds of miles from all the ports and commercial centres of the country whose capital it is. Between Bogotá and Panama there

*Bolivar  
founded  
Republic  
of  
Colombia.*

is no method of communication by land, but from Bogotá to the coast by land and thence to Panama by sea, the journey may now be made in about a fortnight. In Bolivar's time the communication must have been much slower, but Bolivar regarded Panama as the jewel of the new organization, and in 1828 he issued a commission for the formation of a roadway across the Isthmus between the two oceans. He believed that in that narrow strip of land, Colombia held that which would make her a great and wealthy nation. And on November 3, 1903, she lost it. not by conquest, but by secession, and by a secession approved and confirmed, if not aided and abetted, by the greatest Republic in the world, which waged one of the greatest and bloodiest wars on record in order to disprove the right of confederated States to separate from the majority.

There is an enduring historical interest in Colombia because of its association with the struggle of Latin-America to free itself from the domination of Spain. The revolt began before the end of the Eighteenth Century, although the great War of Independence did not break out until 1810. Previous to that war, Colombia was the Spanish vice-royalty of Nuevo Reina de Granada. After that war it formed the Republic of Colombia along with Ecuador and Venezuela. These latter States separated in 1828 and formed distinct republics. Colombia then became the United States of Colombia, with nine confederated States. In 1886 these States were made Depart-

*War of  
Independence.*

ments in a reconstructed Republic of Colombia. One of these States, or Departments, was Panama, with an area of only 30,000 of the 500,000 square miles comprised in the area formerly known as New Granada. In the days of the Conquistadores, the city of Panama was the centre of Spanish influence in the South Pacific, and the Isthmus itself has always been regarded by Colombians as "the navel of the world."

*"The navel  
of the  
world."*

The history of the Panama Canal project may be briefly noted. In 1879 M. de Lesseps began to organize the Panama Canal Company, which was floated in December, 1880. Some 600,000 shares of £20 each were sold, yielding £12,000,000, but the actual cost of the enterprise was estimated by its originator at £26,320,000, and the time required at eight years. The original intention was to build the Canal at sea-level, without locks, like the Suez Canal. The depth was to be 29½ feet, and the width at bottom 72 feet. On the Atlantic side Colon was fixed as the terminal port, and Panama was selected on the Pacific side, the total length of the route between the two points to be followed by the Canal being 47 miles. To carry out the sea-level plan it was necessary to make a cutting 328 feet deep at Culebra. The original scheme was adhered to until 1887, when it was abandoned, and one with a system of locks was adopted. But two years later followed the collapse of the company, and all work on the Canal was stopped. A Commission of Inquiry, in May, 1890, reported that the

*Beginning  
of the  
Panama  
Canal.*

Canal could be completed in eight years at a cost of £23,200,000 which should be increased to £36,000,000 for the purposes of administration and financing. Eventually the concern was revived in 1894 under the title of the New Panama Canal Company.

For half a century, as Mr. Frederick Penfield (formerly U. S. Consul-General in Egypt) has observed, the Nicaraguan was the only Isthmian Canal believed to be available to the United States. As Frenchmen controlled the Panama route, generations of Americans were reared under the influence of the Nicaragua preference, prior to General Grant and onward. It is scarcely necessary to recall that the Walker Commission reported in favor of this route to Congress, and only sent a supplementary report recommending Panama, when the French company climbed down in its terms. Soon after that supplementary report was presented Consul Penfield publicly advocated the acquisition of the Panama Isthmus by the United States. His argument was that the State of Panama was of comparatively little value to the Republic of Colombia, though of inestimable value to a powerful nation constructing the Canal; that the people of Panama have no affection for Colombia, and have even shunned the name of Colombians; that it is at least twelve days' journey from Panama to Bogotá, the seat of Colombian government; that three-fourths of the capital invested in the State of Panama for mining and other purposes is American; and that the United

*Report of  
the Walker  
Commis-  
sion.*

States is pledged by treaty to preserve order on the Isthmus, and has repeatedly had to send armed forces there. What Mr. Penfield advocated was an out-and-out purchase on equitable terms of the State of Panama from the Republic of Colombia, so that the Stars and Stripes may float over the Isthmus, as he predicts it is destined to do over half the West Indian islands. But Panama prefers to be an independent State.

*Penfield's  
arguments.*

President McKinley, in 1899, was authorized by Congress to appoint a commission of engineers and eminent persons to investigate the question of canal possibilities on the Isthmus of Panama, or in Nicaragua. The commission reported in favor of the canal on one or the other routes. Discussion in Congress over the respective advantages of the proposed routes finally ended in June, 1902, by the enactment of a law authorizing the President of the United States to purchase the properties and franchises of the French Panama Canal Company for \$40,000,000, provided a satisfactory title could be secured. At the same time the Secretary of War was authorized, in the event of purchase, to construct the canal at a cost not to exceed \$145,000,000.

Negotiations were entered into with the Republic of Colombia, to secure the necessary concessions, and to ascertain the character of the legal title of the Panama Canal Company. It was found that the company had a valid title, and on February 16, 1903, the United States formally closed the offer, subject to the ratification of

*Acquisition  
by the  
United  
States.*

the treaty with Colombia, then pending, which provided that the United States should pay Colombia \$10,000,000 in cash for the concessions, to be paid on the exchange of the ratification, and an annuity of \$250,000, beginning nine years after the date of ratification, and in return should obtain a lease of the canal for 100 years, with the privilege of continued renewals. The treaty further provided that the territory forming the Canal Zone should be neutral and under the guarantee of both Governments. Colombia, however, failed to ratify the treaty and proposed a new one providing for greater compensation and the explicit recognition of the sovereignty of Colombia in the canal territory. The failure of the treaty created great dissatisfaction in Panama, and on November 4, 1903, the latter country set up an independent republic, which was formally recognized by the United States. A treaty with the new republic was ratified February 23, 1904, by which the United States guaranteed the independence of the Republic of Panama, and allowed it the original compensation offered to Colombia. On its part, the Republic of Panama granted to the United States in perpetuity the use, occupation, and control of a strip of land ten miles in width, extending five miles on either side from the center of the canal, with the proviso that the cities of Panama and Colon should be exempted from this territorial grant.

*The Canal.*

The Panama Canal is to be a lock canal about fifty miles long from the Atlantic terminus in Limon Bay,



near Colon, to the Pacific terminus in Panama Bay. The highest point of the divide, Mt. Culebra, originally about 300 feet above the sea, has been cut to about 160. Beginning at the Atlantic shore line, the canal has a width of 500 feet for three miles to Gatun. At Gatun a duplicate flight of three locks, having a lift of 28 1-3 feet each, will raise vessels up to a lake formed by a dam at that point. This lake is 30 miles long, and at places nearly 8 miles wide. From the Gatun locks the steamer channel will be through this lake for about 23 miles, and for 16 miles it will have a width of 1,000 feet. From San Pablo to Juan Grande it will be narrowed to 800 feet; then to 500 feet to Bas Obispo; then to 300 feet, the width maintained through the Culebra cut and on to San Miguel. Here a lock with a lift and descent of 30 feet forms the connection with Sosa Lake, 55 feet above the sea, where vessels will again have lake navigation for five miles to Sosa Hill, in which are two locks of 27½ feet each to carry vessels down to the sea level of the Panama Bay section of the canal.

The canal will have a minimum depth of 41 feet. It will be formally opened to the commerce of the world January 1, 1915.

[December 30, 1903, the Iroquois Theatre, Chicago, *Iroquois Theatre* burned and 700 lives were lost. On January 5, 1904, Sir *burned.* Oliver Lodge lectures at Birmingham on Radium and its meaning.]